



WOBURN COTTAGE HOSPITAL. (H. Percy Adams, Architect.)

COTTAGE HOSPITALS.

By H. PERCY ADAMS [F].

Read before the Royal Institute of British Architects, Monday, 14th March 1921.

WHEN the Council of the Royal Institute of British Architects invited me to read a Paper on Cottage Hospitals, I appreciated the compliment, but I must confess the subject at first sight did not appear to offer much scope for a Paper to be read before such an audience, yet any discussion that these notes may give rise to cannot fail to interest architects and others proposing to erect cottage hospitals.

There has been very little literature upon this subject. A few pamphlets were issued in 1860-70, and short accounts have appeared from time to time in the technical journals. The most recent work seems to be that very complete book by the late Sir Henry Burdett called *Cottage Hospitals*, the last edition of which was published twenty-five years ago. This shows a few plans, but gives little information of interest to architects about the construction and details.

Probably the first cottage hospital was that erected at Cranleigh, Surrey, in 1859, by Mr. Albert Napper, and he appears to have organised a system to overcome the defects of giving free medical relief, by insisting that patients should contribute something, according to their means, and that medical men should be allowed to see their own patients in the wards; this scheme of payment has been more or less adopted in nearly all cottage hospitals and, since the war, owing chiefly to lack of funds and the recognised ability of the working classes to pay, has been adopted in most of the general hospitals.

The object of a cottage hospital is to provide readily accommodation for the sick poor, in districts situated long distances from towns having general hospitals; to enable local doctors to treat their poorer patients under favourable conditions, and to allow local and visiting surgeons to perform operations which otherwise would have to be sent long distances to the general hospital.

Cottage hospitals are of two distinct types: those that have been converted from existing buildings, and those that have been built for this purpose. In the former, the original building has probably largely governed the plan, as at Cranleigh, where a Surrey cottage was converted at a cost of £50. In a new building there is more opportunity of arriving at the ideal, both in the plan and detail. New buildings are also of two classes: the permanent, of brick, stone or concrete; and the semi-permanent, such as wood-framed buildings and those built of slab partitions, etc.

A cottage hospital is generally understood to be one containing any number from three to twenty or even to thirty beds; above that number they become general hospitals. Much the same rules apply

in designing and constructing both. Forty years ago it was contended that better results were obtained in the cottage than in the general hospital. This was probably owing to the larger floor and cubic space and the greater individual attention given to each patient, also to the fact that the former are usually in the open country; but statistics do not now show that there is any distinct advantage. The hygienic conditions and the medical and nursing attention have vastly improved in general hospitals in recent years. In most cases it is easier to raise money for the upkeep of a cottage than of a general hospital; the local residents know its objects and have a more personal interest in it, local clubs subscribe generously, and entertainments and concerts are organised on its behalf; and what more fitting memorial is there than a cottage hospital?

Approximately the number of beds provided in the country districts where cottage hospitals exist is about four per thousand of the population. As to the cost of building, this at the present time is very difficult to arrive at; probably about 2s. 6d. a foot cube would be somewhere near the mark, but approximating the cost at so much per bed is always elusive and a very deceptive method of arriving at the cost of any hospital, as so much depends on the surroundings, the nature of the site, local conditions, and the accommodation provided—and these all vary enormously.

The site should be easy of access for patients and medical officer, and as far as possible ought to have a gravel subsoil, not clay; be dry, thoroughly well-drained, clean, and well raised above the surrounding country, in a sunny position, sheltered from cold winds, free from drainage from higher ground (which should be intercepted if necessary); there should not be many large trees near the buildings as they attract moisture and interfere with the free circulation of air. If expense is not of great importance, it is well to have the ward floors well above the ground level, and the surface of the building site should always be covered with a layer of concrete. A good water supply is essential, and it is a great advantage to be able to connect the drainage to a main system.

The general arrangement of the plan depends largely on the number of beds to be provided; there are many details considered essential in a general hospital that are not possible in a cottage hospital. Quite small buildings are usually in one block and provide for about six beds, generally consisting of a male ward for two or three beds, female wards for two or three beds, a single-bed ward, a bath room, a sink room and w.c. for each sex, and for administration; a kitchen, scullery and larder, an operating room, a small dispensary, a sitting room and three bedrooms for nurses and servants, a staff w.c., a shed for fuel and ambulance. From six beds upwards, there is a tendency in most plans to obtain more complete separation of the kitchen department from the wards, undoubtedly a great advantage to the patients.

The accommodation is usually a male ward of from four to eight beds, female ward of from four to eight beds, one or two single-bed wards, bath room, sink room and w.c. for each sex, ward kitchen, larder, linen room, store for patients' clothes, operating room with possibly small sterilizing room adjoining, a doctors' room or dispensary, nurses' sitting room and two to four nurses' bedrooms, servants' bedrooms, bath room and w.c., general kitchen, scullery, small pantry, larder, store room, stores for fuel, a detached mortuary and ambulance shed. The larger cottage hospitals for over twenty beds more or less follow the pavilion type of plan, and are really miniature general hospitals.

DETAILS OF THE PLAN.

Opinions differ largely as to the cubic feet to be allowed patients in the wards—1,000 feet to each bed should be a minimum; some authorities allow 1,500 or even more; the floor area per bed should not be less than 100 square feet, the head space per bed—that is, from centre to centre of beds—should be at least 8 feet, and wards with beds on both sides should be at least 20 feet wide, or 24 feet wide if there is a central fireplace; the minimum height of a ward for six beds or over should be 11 feet. The walls and ceilings should be of some non-absorbent material, such as cement or plaster, with a hollow cove in the corners and next the ceiling. Distemping is usual, but if finished

with enamel paint, at any rate on the dado, it is far more lasting and preferable in every way. Tile dadoes are expensive, but can be made to look extremely well, are easily washed and more or less permanent. A few years ago a wall-paper was introduced into this country from Switzerland called *Salubra*: it was paper, covered with four or five coats of enamel, it could be quickly fixed, had a long life and was easy to wash, but, although very largely used on the Continent, does not appear to have been used much, if at all, in England for hospital wards.

Floors of teak are as good as any, and if of boards they should be secret nailed, but a good teak parquet has closer joints and is even better. They should be finished with a polish of beeswax and turpentine, never washed, but dry cleaned. Oak is not so good as teak, as the grain is more open, and maple, although hard, is treacherous and likely to wear unevenly. There should be a hollow cove of teak four inches high next the walls. A good floor can be made with thick linoleum, either laid direct on the cement concrete or on a deal-boarded floor and wax polished. Many jointless composition floors are on the market composed largely of sawdust or cork, and are well advertised with delightful little coloured samples, but it is questionable if they are quite satisfactory for hospital wards. They wear roughly, and most of the colour disappears in a short time.

Windows for wards should have a glass area of not less than one square foot to every 64 feet of the cubic area. The glass line should be not more than 2 feet 6 inches to 3 feet from the floor, and should be taken up as near as possible to the ceiling. The best form is a double-hung sash with the lower rail of the bottom sash 6 inches deep and with a deep bottom rail on the cill so that the lower sash, when raised a few inches, allows of ventilation at the meeting rails, and above the sashes there should be a transome with a fanlight over it, having, in order to avoid down draught, independent glass side cheeks fitted in an iron frame and so made that the fanlight can pass the frame for cleaning purposes. Another good type is constructed with two "austral" balance sashes of equal size, and with transome and fanlight over as before. The advantage of these windows over the ordinary sashes is that they do away with the need of boxing, sash lines and weights being arranged on a system of one sash balancing the other on a pivot turning upon a fixed point. It is well to fix obscured glass in the fanlights over the transomes and clear sheet or plate glass in the sashes; the blind or curtain can then be fixed at the transome level. The best window boards are those made of polished teak, tiles or glass.

Doors to the wards should be at least 3 feet 6 inches wide and as far as possible without mouldings; if panelled doors are used the panels should be large, and to avoid shrinkage American white-wood, compo board or linoleum can be used, but there are excellent flush-on-both-sides doors on the market built up and veneered with teak or birch, and french-polished. There should be no moulded architraves, and if these must be used then flat slips of wood with slightly rounded edges are best. One method of dispensing with architraves is to cover the join between door frame and plaster with a glued strip of canvas, sandpapered when dry, and then painted.

Joinery can be either painted, enamelled, or stained and varnished; enamel is best, but stained and varnished less costly in upkeep. Door and window furniture should be of the simplest forms and of material to minimise cleaning, such as bronze left to go its natural colour, silveroid, hard wood, glass or china. Where there is much traffic it is well not to have square plaster angles, as they soon become chipped.

The sanitary annexes, containing the sink room and w.c., have in most recent hospital work been disconnected from the wards by what are called cross-ventilated lobbies. In these days of modern sanitation these are hardly so necessary as in the old days of indifferent plumbing; in the new plans just issued by the Ministry of Health for model maternity hospitals, and also in the recently erected hospital in connection with housing schemes, and in the new Chelsea Hospital, by no less an expert than Mr. Keith Young, the sanitary annexes are no longer disconnected from the wards by cross-ventilation.

It is an undoubted fact that the windows in cross-ventilated lobbies are often kept closed and that the doors are often fixed open. Windows fitted with glass louvres which cannot be quite closed have

been used, so that a cross-current of air is guaranteed. The objection to this is that the patients are subjected to a draught in passing through to the closets. These sanitary annexes should, if possible, be warmed, as otherwise the air from them is drawn into the ward. The ceilings of the connecting lobbies are sometimes lower in height than the main ceiling of the wards, the space between this low ceiling and the floor above being in the form of a bridge and open to the outer air in order to allow a free circulation of air around the wards. The floors and walls should be of materials as impervious as possible—white marble terrazzo for the floors, with cove skirtings next the walls, and the latter either tiled, enamelled, painted or distempered. W.c. doors should always open outwards, as otherwise a patient may fall against the door and prevent it being opened. The w.c. apparatus should be of the simple wash-down pattern, and the corbel type is perhaps the best, as it allows of the floor being more easily cleaned.

The sink rooms should contain a special sink for emptying bed pans and receiving slops, and should have a three-gallon flushing tank. It is very useful to have a scrubbing slab and an adjoining sink for soaking mackintosh sheets and soiled linen. There should be a rail or shelf for bed pans, over a radiator if possible, and a cupboard for brooms and pails. In larger hospitals I have frequently provided a small glass-fronted and topped cupboard, with direct gratings to the outside air, for keeping excreta and urine that have to be examined by the doctor; if this cupboard is built across the corner of the room the gratings will afford good cross ventilation. In many hospitals the doors to the sink rooms have been removed, and it is questionable whether they are really necessary. In quite small hospitals for as few as three or four beds, in order to obviate the necessity of a sink room and a special bed pan sink, a long bracket tap can be fixed on the wall which can be swung out over the w.c. apparatus to wash out the bed pans, but this is not an arrangement to be recommended.

The bath room should be, if possible, 9 feet by 8 feet, and the bath placed centrally in the room, with the head of the bath facing the window; one bath room is usually enough for ten or twelve patients, and, if well placed, can be used by both sexes. The bath should be of porcelain-enamelled iron, and to simplify cleaning the taps could be of the same material. In quite a small building I prefer brass or gunmetal, as nurses take a pride in a few bright things. On all groups of hot and cold water fittings there should be a stop-cock so that any one section can be cut off for repairs without emptying the entire system.

A ward kitchen or duty room is usually provided in hospitals of more than ten or twelve beds. Here the washing up and minor cooking operations for the wards are carried out. If placed between the male and female wards, with small spy windows, a night sister can well supervise two wards. There should be a sink at least 2 feet by 1 foot 6 inches by 8 inches placed either in the window or on the wall to the right of the window, with teak capping to edge of sink and grooved draining board; both of these should be hinged for cleaning purposes, as grease quickly accumulates under the edges. The best plate rack is that made with two hard wood sides and galvanised iron wire divisions. There should be a fixed dresser, the wall of the room forming the back, and tiled; the lower part should have two drawers and a hard-wood top that can be scrubbed, and above this shelves for crockery, the shelves fixed $\frac{1}{2}$ inch away from the back so as to be easily cleaned, and without corners. There should be a small coal range with oven, or a gas oven with gas ring on the top; also a small tile-lined (or fireclay in one piece) larder for milk, beef tea, etc., well ventilated by gratings to the open air.

OPERATING ROOM.

The operating room is sometimes omitted in quite small hospitals and some other room has to do duty in emergencies, but where the building has been erected by some wealthy patron the operating room is often as well furnished and equipped as in any general hospital. Bath rooms have been built especially large and used as emergency operating rooms, with good results.

The ideal operating room should not be less than 18 feet by 16 feet and have a large north side light as well as top light made of iron and glazed with clear plate glass where not overlooked. A few

iron bars are no detriment, as being on the north side they cast no shadows. The cill of the window should be at least 3 feet 6 inches from the floor and part of the window made to open as casements. The ceiling and walls can either be of white glazed tiles or enamelled, the floor should be of white terrazzo, and taken up the wall as skirting for at least six inches, with a hollow formed in all angles; the cills of windows should be either of tiles or glass, the doors perfectly flush both sides and four feet wide. It is an advantage to finish an operating room white as far as possible, it can then be seen at once if not kept spotlessly clean, and one rarely gets too much light. The fittings usually provided are, at least one sink 2 feet by 1 foot 6 inches by 10 inches, with white fireclay slab on either side and one lavatory basin. There are various devices for turning the water off and on without using one's hands; the simplest and best is to have a cranked length to the lever tap that can be moved by the arm, and with a projecting rose so that the hands may be washed under running water. The sinks and lavatories should discharge by a vertical enamel iron waste pipe, removable for cleaning, over a white glazed channel. This serves also for sluicing down the floor. Over the sinks and lavatories, and also alongside them, are fixed plate glass shelves on metal supports for the antiseptic solutions, etc.

The best heating is obtained by vertical loop radiators with the loops specially wide apart so as to be readily cleaned. The radiators in operating rooms are often supplied from the hot water services so that at any time the room can be warmed when the heating boiler is not in use. Radiators are best made to swing out into the room for cleaning purposes; they should be supplied with fresh air through glazed pipes or tiled inlets in the outside walls, having removable baffle gratings for access, so that the glazed inlets can be sponged out.

There should be extract ventilators next the ceiling, but if electricity is available it is an advantage to have a small electric fan fixed in the wall next the ceiling on the opposite side of the room to the inlet ventilators. By this means the air can be changed in a few moments.

In small hospitals electric radiators are useful in heating the operating room quickly in an emergency.

WARD FURNITURE.

Bed lockers are required for patients, these standing next to their beds, and are of various patterns, usually a cupboard below to contain shoes, brush and comb, etc., and the top forming a shelf; some have an upper deck or shelf above. One was made for me some years ago, and is now largely used in general hospitals; it consists of a locker below, and the top forms a seat for patient or visitors (thus doing away with the need of a chair); the back is hinged at the top with a movable bracket under it so that when lifted and the locker slung round it forms a table over the bed on which the patient can have meals and play games, and behind the back is a cupboard with glass shelves. This is open only on the side opposite to the patient's bed and is used by the nurse for medicines. The top is covered with opal glass or tiles and is used for medicine glasses and drinks, and has a wood roller at the back for hanging a towel, and there is a rail above with a clip for the patient's record card.

The ward table should be of the simplest form without turned or moulded legs, the top either of glass, tiles, polished hard wood or of linoleum wax-polished.

Bedsteads should stand away from the wall at least six inches, and to enable this to be done and to obviate the necessity of a raised wood fillet on the floor, have been made with the side frames lengthened by six inches at the head and rubber buffers inserted to prevent damaging the wall. These lengthening pieces are also useful as handles in moving the beds.

The cupboards for patients' clothes should be well ventilated and placed outside the wards and in charge of the nurse. All cupboards should either be taken up to the ceilings or have sloping tops that can be seen from the floor. Baskets should not be used for soiled linen; bags are better, as they can be washed.

Roller blinds for wards are not very hygienic unless they can be washed or cleaned; it is preferable to have washable curtains.

The remaining administration rooms should all be treated as to detail in a similar way to the wards, with no dark corners, and everything designed so as to be easily cleaned and with no moulding or places for lodgment of dust and dirt. If corridors are laid with terrazzo, to prevent cracking, it is best to lay them in panels of not more than 9 feet square with slips of wood temporarily placed between the panels and at a later date replaced with cement. The general kitchen and offices should have solid floors, the kitchen with a surface of wood block, and scullery, larder, etc., of tiles, terrazzo, or cement, the ceilings and walls painted or distempered.

The bedrooms if fitted with lavatories will save labour.

HEATING.

Heating of small cottage hospitals is usually by either open coal fires or by gas stoves, and in the larger hospitals these fires are often supplemented by heating pipes or radiators from a central heating apparatus. The open fires should be of the slow combustion type and the best are those supplied with external air to a chamber at the back of the stove delivering the warmed air at a height of about seven feet into the ward. A most efficient and perhaps the cheapest possible slow combustion fire can be built with a few fireclay bricks laid edgewise on a solid hearth with an inch space between the bricks.

An inexpensive method of heating the wards of a small hospital is to have a closed type of anthracite stove with hot-water boiler at the back, the front of the stove fitted with mica and the stove fed and the ashes removed from a door at the back of the stove opening into the ward kitchen or the corridor. By this means the ward is kept free from noise and dust, and from the hot-water boiler at the back of the stove would be flow and return pipes to feed radiators to warm the wards. All radiators wherever possible should have a supply of fresh air fed to them by means of glazed pipe flues in the external walls.

Hot-water services are usually supplied from a boiler at the back of the kitchen range or from an independent boiler, and the storage cylinder for hot water is well placed in the linen room (the latter should have open lattice shelving). From the cylinder flow and return pipes are taken in the usual manner to the various fittings. It is better to paint all pipes and radiators with metallic paint rather than oil paint or enamel as the latter soon chips off and becomes discoloured.

LIGHTING.

Lighting by natural light is essential in every part of the hospital, not only in wards, but in every corner and cupboard; daylight is the enemy of disease and also of dirt. Artificial lighting by electricity is undoubtedly the most efficient and hygienic, and if not obtainable from the public mains there are several types of combined plant on the market consisting of petrol engine, dynamo and storage battery, automatically started and stopped by merely switching on a light. It is well, on account of noise and vibration, to instal the plant in some room well away from the main building. In lighting a ward by electricity the lights should be distributed so as not to allow a glare in the eyes of the patients; probably the best method is to have a central light with a shaded night light, and a bracket and wall plug to each bed or between each two beds, fixed at 6 feet 6 inches from the floor. The light can be shaded so as not to annoy other patients, and the wall plug serves for a hand lamp for the use of doctor or nurse. A cheaper method is to have a hanging wall bracket that can be unhooked and used as a table or hand lamp.

DRAINAGE.

Drainage, where possible, is best connected to a main drainage system, but in out-of-the-way districts it may be necessary to dispose of the sewage by other methods, such as earth closets or a septic tank system, if ample land is available for the purpose. Earth closets involve a good deal of labour, and portable earth closets for those confined to bed are always a nuisance.

Drains are usually of socketed stoneware pipes with cement joints and laid on a bed of cement

concrete, or of cast iron pipes with molten lead joints and laid on concrete or supported by concrete under the joints. All drains should be laid in straight lines, and where there is a change of direction a manhole for inspection should be placed; approximately, for horizontal drains, one in forty is the best fall. Vertical soil and ventilating pipes are either of lead or cast iron, and for larger hospitals where there is much in use iron is better, as lead pipes are likely to buckle from hot water used for the bed pan sinks, and lead cannot be plunged through so easily as iron. I have known 3½-inch lead soil pipes completely blocked in twenty years with a hard rock-like urine deposit impossible to clear.

All sink, lavatory, and bath wastes should be ventilated and vertical wastes taken to the top of the building. No open heads should ever be used for receiving these wastes, as they collect filth.

All internal pipes for plumbing work should be exposed, and it is best if they are kept clear of the walls.

Few cottage hospitals have been erected that show the special knowledge of detail so thoroughly studied in most modern general hospitals, and Dr. Mackintosh's remarks in his recent excellent book, *Construction, Equipment and Management of a General Hospital*, would equally apply to most cottage hospitals. He says: "The main principles underlying the construction of a hospital can, no doubt, be laid down and applied by any skilful architect. But in a modern hospital there are details of construction of which the need and the conditions under which the need can be met are known only as a result of experience in hospital administration. . . . It frequently happens in modern hospital plans that while the buildings themselves are on approved lines the lack of administrative detail negatives much of the benefit which might otherwise be obtained."

I now propose to describe shortly a few cottage hospitals.

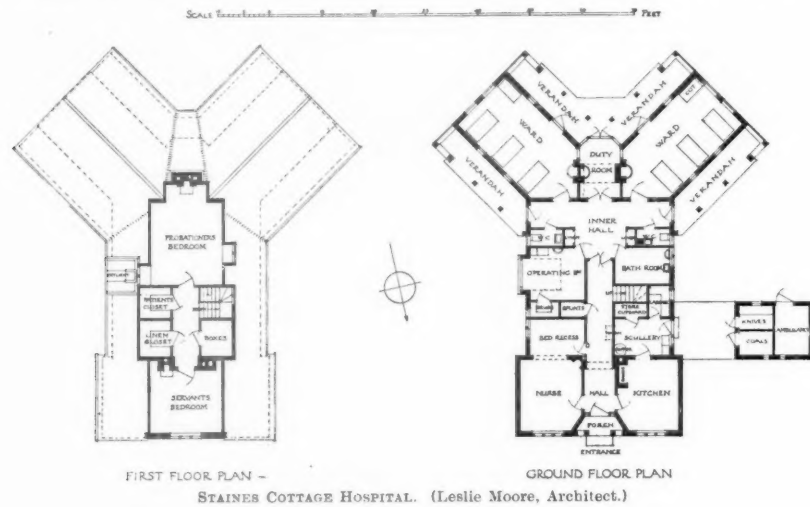
CRANLEIGH COTTAGE HOSPITAL was probably the first erected in this country, and although of very primitive type, being adapted from a Surrey cottage at a cost of only £50, has done much good work.

MANCOT COTTAGE HOSPITAL, near Chester, was erected in 1916 in connection with the Government housing scheme at Mancot. It is an interesting plan on quite different lines from any other cottage hospital. The wards, with their sanitary annexes, occupy the whole of the southern side of the block; the operating room, with north aspect, is centrally placed; the kitchen and female staff quarters are in the west wing, and the medical officers' quarters in the east wing. The plan is compact and economical; the wards are not cross ventilated by windows, although the position of the ward doors opposite the corridor windows would assist the ventilation, and for six beds the cubic contents for these wards is only 770 feet per bed. The ventilation is assisted by Tobin tubes and roof extracts, a rather out-of-date method in hospital work. The architect was Mr. Raymond Unwin. (See plan, p. 289.)

EAST RIGGS HOSPITAL AT GRETNÄ.—This hospital is also from the Ministry of Munitions, and is an isolation hospital. The wards are only 22 feet wide, and have central stoves which do not allow of sufficient space between the beds in the centre of the ward. There is no cross ventilated lobby between the w.c.'s and the wards. The architect was Mr. Raymond Unwin.

STAINES COTTAGE HOSPITAL was erected in 1914, and is quite a model little hospital. The plan is Y-shaped, with the arms forming the wards facing south. Each ward is planned for three adults and one child, and there are verandahs on two sides of each ward. Unfortunately, the doors leading on to them are too narrow for the patients' beds to be wheeled through; there is cross ventilation of the ward by small sash windows and a large window at the end of the ward with lower sashes folding horizontally one over the other and with a fanlight above the transome. Between the wards is a small room used by the night nurse when on duty, and having small spy windows looking into the two wards. At night, with an electric light in this room, it is not necessary to have any light in the wards. Originally planned with a w.c. for each ward, but with no w.c. provided for the staff, one of these is now taken for the

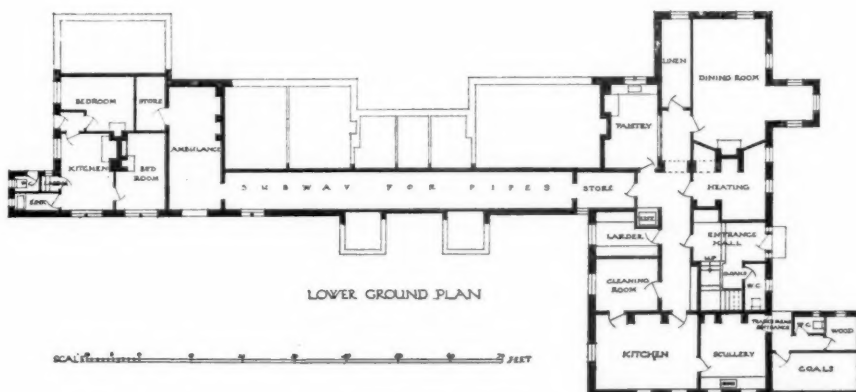
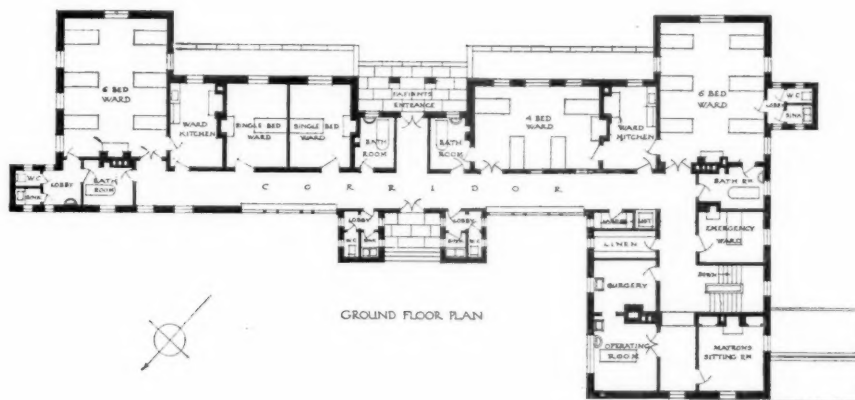
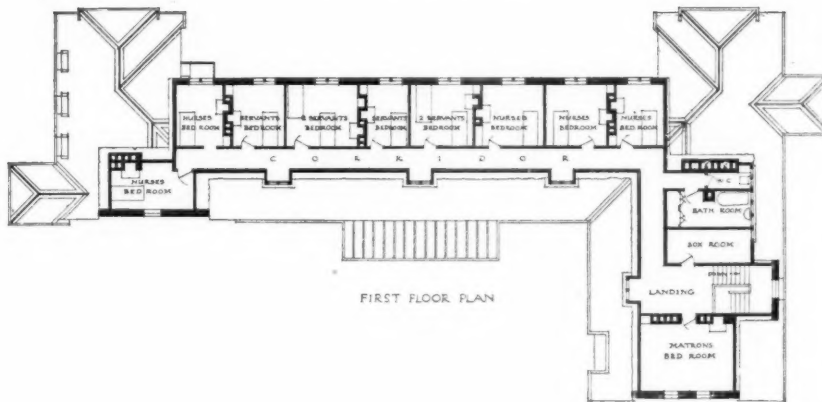
latter, and the male and female patients use the same w.c., an extremely unsatisfactory arrangement, and, to make matters worse, in this w.c. is a slop well, with taps over it for cleaning bed pans. The bath room is ample in size and is fitted with an iron bath on wheels, but far too heavy to move. The



sterilizing is all done in this room, and for a small hospital seems a good arrangement, and especially if the bath room is planned adjoining the operating room. The operating room is very small, but well lighted with a top and side light and well fitted; all the service pipes to the fittings are concealed by wood casing, enamelled white to match the walls. The floor is of white terrazzo. A small dispensary



is entered through this room. The heating is by a radiator supplied from a boiler at the back of the dining-room fire, and this is supplemented as occasion requires by electric radiators. The front block, facing north and looking on to the main road, contains the kitchen, scullery and larder on one side of



SOUTHPORT COTTAGE HOSPITAL. (H. Percy Adams, Architect.)

the hall and on the other the nurses' dining-room and sisters' bedroom. On the first floor are the matron's, night nurses' and servants' bedrooms—unfortunately, the night nurses' bedroom is directly over the operating room, the noise from which is often very disturbing. All the ground floor rooms, with the exception of the operating room, have solid concrete floors covered with linoleum, wax-polished, and red tile skirtings. All the joinery work on the ground floor is enamelled white, excepting in the kitchen department, where it is grey, and on the first floor it is all stained. The building is lighted with electricity from the company's mains; each patient's bed has a movable wall bracket that can be used as a table or hand lamp, and telephones are connected to the bell wiring. There is a small isolated building for mortuary, with a knife house and coal store. The elevations are very picturesque, standing in well-laid-out grounds. The whole was carried out for the extremely low figure of £1,250, and reflects the greatest credit on the architect, Mr. Leslie Moore. (See plans, p. 280.)

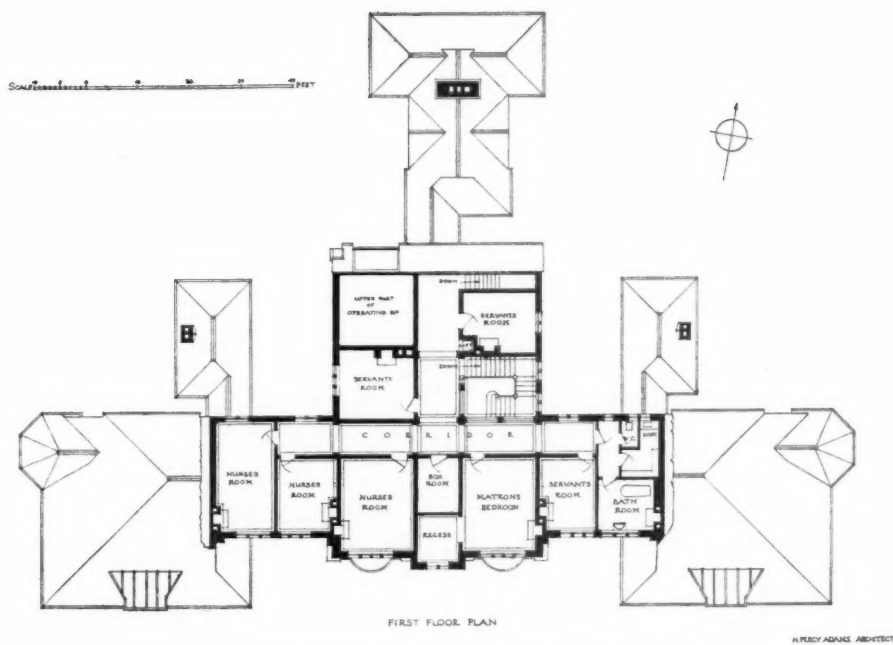
WELLS COTTAGE HOSPITAL was erected in 1910 by tenants on the Holkham Estate as a memorial to the Earl of Leicester; the plan is very similar to the one at Staines, practically the only difference being the omission of an operating room and the outside coal store and mortuary. Everything here seems to have been reduced to a minimum. There is no special sink room for the wards and no separate w.c. for the staff. Yet one cannot but marvel in these times, when assured that this little hospital complete, including a well 20 feet deep and a pump, the roadway, the oak gates, the lighting and the drainage system with a septic tank, were all carried out for £1,000. The architect was Mr. Leslie Moore.

WELLINGTON COTTAGE HOSPITAL was built in 1912 and was designed for 16 beds, but at present only ward accommodation for eight beds has been carried out. The plan is unusual, but has many good points. The wards, each 20 feet 6 inches by 19 feet 6 inches by 12 feet high, have a good aspect and are well cross ventilated. There are no separate rooms provided for sinks for emptying bed pans. These are placed in the w.c.'s; not a good arrangement. The wards for male and female patients are very close together, but undoubtedly by this plan, with a small nurses' room between them, the supervision is simplified, especially the night duty. For the extension it will be necessary to pull down the entire ward ends and the fireplace and chimney stacks. None of the large space over the wards is utilised in any way. The cost of the building was £2,000. The elevations are quite interesting. The architect was Mr. Leslie Moore. (See plans, p. 280.)

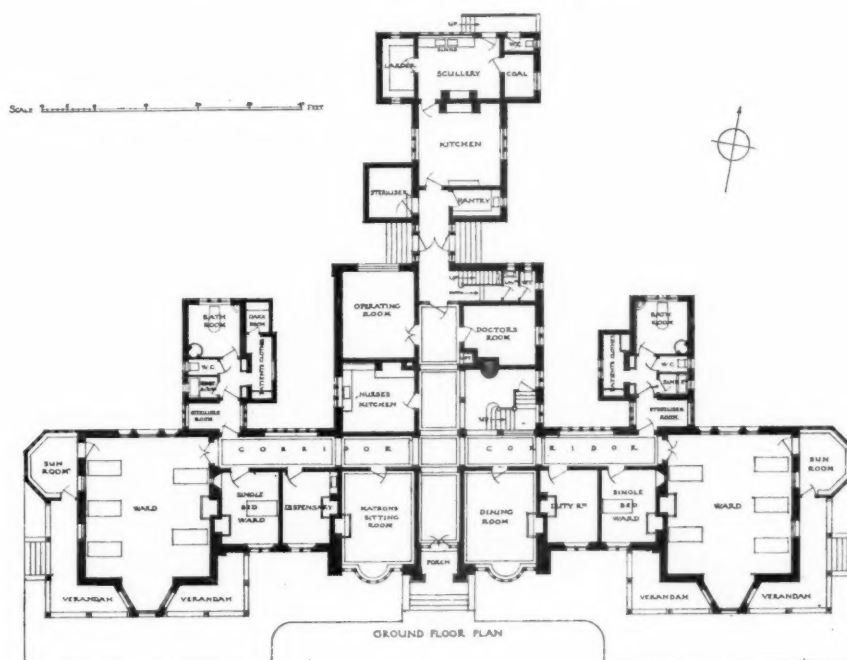
AXMINSTER COTTAGE HOSPITAL was built in 1912 on an extremely limited and awkward site; probably it would have been better to have found some other site, for the plan has few features to commend it; possibly it was the best that could be done on such a restricted and awkward site. The architect was Mr. Leslie Moore.

HENDON COTTAGE HOSPITAL was built in 1913 as a memorial to King Edward VII. and is designed on a Y-shaped plan, each arm consisting of a three-bed ward 20 feet by 19 feet by 12 feet, with ample verandahs and with sanitary annexe containing w.c., sink and lavatory well cut off by a cross ventilated lobby; the bath and ward kitchen are placed between the wards and entered from a well-lighted corridor shut off by swing doors from the administration section. This is two floors high and the ground floor consists of an operating room with good top and side light, and a terrazzo floor, a single bed ward, a small dispensary, kitchen, scullery, larder, and outbuilding containing coal house, ambulance shed, tool house, and w.c. On the first floor are bedrooms for matron, two nurses, and two servants, bath room, w.c., housemaid's closet and linen cupboard. Recently an addition has been made consisting of a kitchen and scullery with two bedrooms over, and the original kitchen is now used as a nurses' dining room. The floors are all concrete on the ground floor, and covered with linoleum in the wards, wood blocks in the kitchen, terrazzo in the operating room and bath room, and tiles in the hall and corridor. The hospital is very similar in plan to those at Wells and Staines and carefully thought out in all its details. The cost of the building was £2,250. The architect was Mr. W. A. Forsyth. (See plans, p. 289.)

BEAWORTHY COTTAGE HOSPITAL was erected in 1903. The wards have good aspect but no cross ventilation, and the sanitary block is well cut off from the corridor. It contains only a w.c. and no



WOBURN COTTAGE HOSPITAL. (H. Percy Adams, Architect.)



WOBURN COTTAGE HOSPITAL. (H. Percy Adams, Architect.)

slop sink; the wards are too far apart to be easily supervised; many of the rooms in the building face due north. The children's ward looks over the railway, and the reason for this, the architect states, was that it was the only entertainment they were likely to get near the site. The floors of the corridors are paved with tiles, which are generally noisy. The elevations are quite interesting. The architect was Mr. C. F. A. Voysey. (See plan, p. 287.)

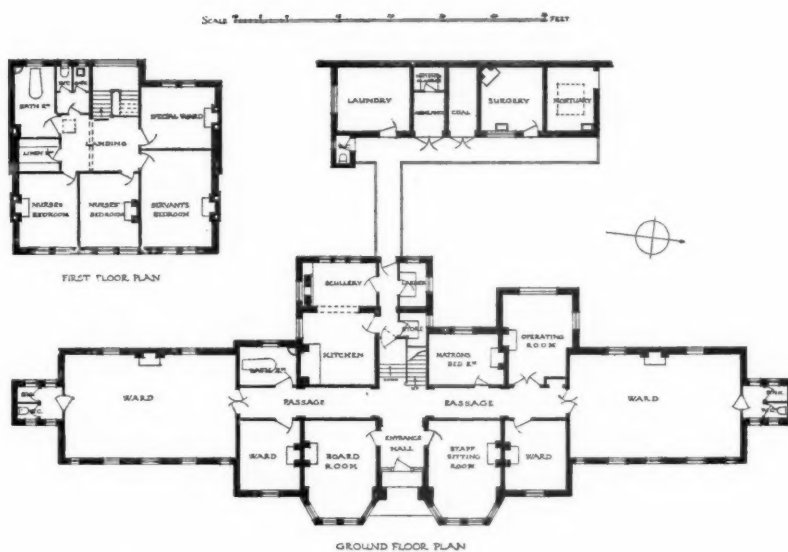
WOBURN COTTAGE HOSPITAL (see plans, p. 288) was erected by the Duke of Bedford in 1903 on a beautifully situated and elevated site facing almost due south; there is a separate isolation block, about 40 feet away to the north of the main building, and in one corner of the site, hidden by a well shrubbed bank, is the mortuary. The sketch plans of the hospital were made by the Duchess of Bedford, who took the greatest interest in every detail of the work. The hospital is planned for 12 patients, six of each sex; on the right of the entrance is the men's ward with five beds and a single-bed ward, and on the left the women's wards are similarly arranged. The sanitary annexes are on the northern side adjoining the wards; there is also in this front block a dispensary fitted with a sink, a day room for patients, a matron's sitting room, and a staff dining room. To the north of the ward corridor is the ward kitchen, fitted with sink, dresser and a small range; the operating room with a north and top light and fitted with sinks and lavatories. On the opposite side of the corridor is the surgeon's dressing room (this room was originally planned for a housekeeper's store room), and shut off by a glazed screen is a staff lavatory and the back staircase. Further to the north and disconnected by a cross-ventilated lobby is the kitchen department, only one floor high, and comprising kitchen, scullery, pantry, larder, coal store and servants' lavatory. On the first floor are bedrooms for matron, nurses and servants, with bath room, linen room and w.c.

The large wards, planned for 5 beds, are 27 feet by 24 feet and 12 feet high, with segmental ceilings. The floors are of teak, waxed and polished, the walls are tiled with pale green tiles to a height of 5 feet, and above that height the walls are finished with white enamel paint, and also the ceilings. The sun rooms, entered off the large wards, are tiled throughout and give access to the tiled verandahs on three sides of the wards. The heating of the wards is by open fireplaces, supplemented by radiators of the open loop type, and heating pipes are taken round the sun rooms. The wards are lighted by electricity with a central fitting and with bracket lights and wall plugs over each bed. The windows are double-hung sashes with a "fall in" hopper above, having glass side cheeks to obviate any down draught. All the corners of the wards are rounded and there are no moulding or projecting surfaces. The main staircase is entirely of teak and the corridors paved with white terrazzo.

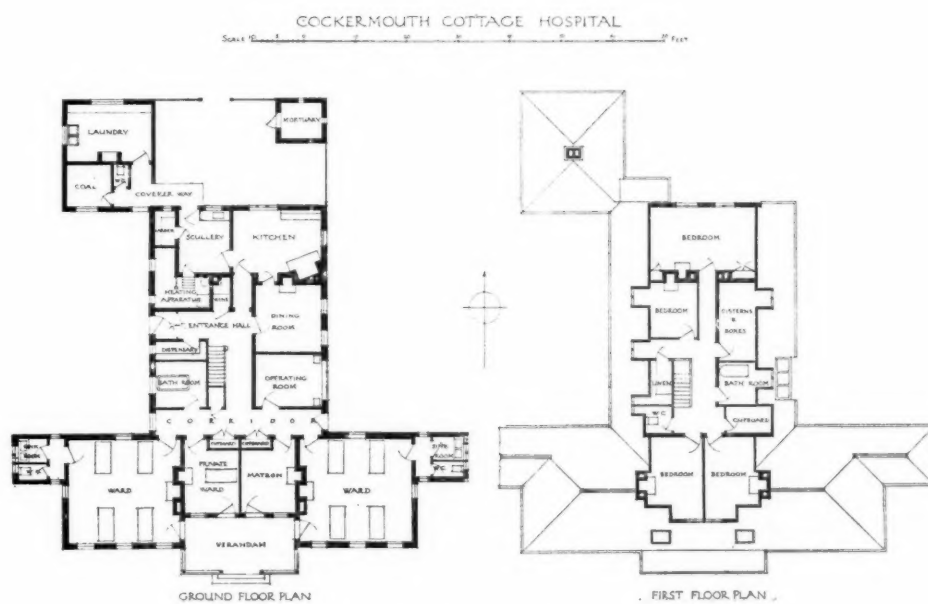
The electricity is generated in an adjoining building; originally the plant was placed in the basement, but the vibration and noise were very disturbing and so it was moved to an adjoining building. The water is pumped from a spring three-quarters of a mile distant. The drainage is taken to a septic tank situated in a field at a lower level.

This hospital is used largely by the whole county, and has developed into a small special hospital for surgical treatment. The operating room is most completely fitted, and recently a sterilising room has been added, but unfortunately this is not next to the theatre, as it should be. An additional sterilising apparatus has been placed in the lobby adjoining each large ward.

Her Grace the Duchess of Bedford, who has had very considerable experience in the working of a hospital, having designed and superintended a completely equipped hospital for eighty-two beds, erected at Woburn Abbey during the war by the generosity of the Duke of Bedford, has very kindly given me some valuable criticisms. Her Grace is opposed to any ward that by its plan entails the patient being in a draught—there should be plenty of fresh air but no draught—and contends that all modern cottage hospital wards are wrong in principle, with their cross ventilation and the beds placed between doors and windows and the consequent despairing sequel of complaints, and that better results would be obtained by planning wards with large windows on the side facing south and small high windows above the beds on the north wall which could be opened when the weather did not permit



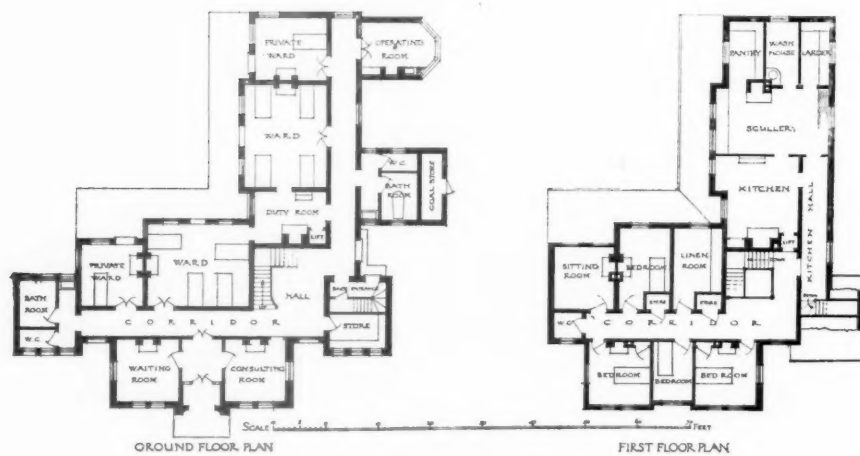
CREWKERNE COTTAGE HOSPITAL. (Messrs. Young and Hall, Architects.)



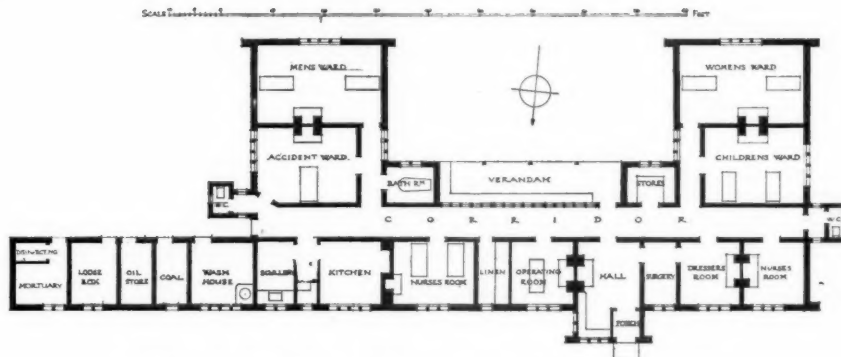
COCKERMOUTH COTTAGE HOSPITAL. (E. Guy Dawber, Architect.)



SMILEY COTTAGE HOSPITAL, LARNE. (Messrs. Tulloch and Fitzsimons, Architects.)



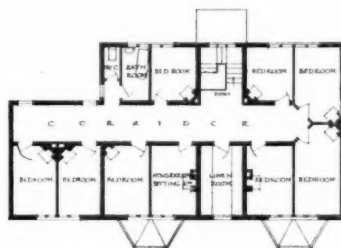
FELIXSTOWE COTTAGE HOSPITAL. (Henry J. Wright, Architect.)



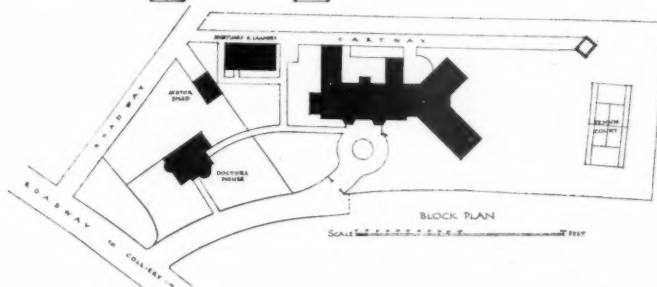
WINSFORD COTTAGE HOSPITAL, BEAWORTHY, DEVON. (C. F. A. Voysey, Architect.)



GROUND FLOOR PLAN



FIRST FLOOR PLAN



BLOCK PLAN

WARDE ALDAM COTTAGE HOSPITAL. (E. Holdsworth Walker, Architect.)

of the large windows being open, the doors in and out to be on the east and west side of the ward and opening near the windows, so that the beds are out of a draught. A small ward was formed on these lines at the Woburn Abbey War Hospital, and better results were obtained than from any other ward. An operating room in a cottage hospital should always have, if possible, a space set apart for a sterilising room; and as operations are carried out whenever possible with the windows open, these should be arranged to open to exclude the weather. Closed cupboards are preferable to open shelves. No plant for generating electricity should be placed in a cottage hospital; the vibration and noise are very disturbing to both patients and staff. It is probable that in the future all cottage hospitals will require some room for X-ray work. It is unnecessary to provide any separate building for isolation if there is an infectious hospital in the neighbourhood; a room in the building is sufficient for the short time it is used.

SOUTHPORT HOMOEOPATHIC COTTAGE HOSPITAL.—This hospital was built in 1912 on the site of an old battery on the sand hills, and the plan was largely influenced by the irregular levels of the site and also by the very exposed position. Any cross ventilation to the wards is obtained by borrowed lights into the corridors. The plan, I confess, does not look ideal on paper, but there were very special circumstances governing its arrangement, and the actual working is, I believe, extremely satisfactory. The late Mr. Norman Shaw selected the design in a limited competition. (See plans, p. 281.)

The building consists of three floors—namely, a lower ground floor under the west wing and part of the east wing, with a subway for pipes connecting the two, ground and first floor. The west wing lower ground floor consists of kitchen, offices, and staff entrance and dining-room. The east wing contains the quarters for a married couple and the ambulance shed. The main front faces south-east, with a central entrance on the ground floor. The hospital is designed for 19 patients; there are two wards for six beds, each 27 feet by 20 feet and 12 feet high; one ward for four beds, 24 feet by 16 feet; two single bed wards, 16 feet by 12 feet, for patients who are able to pay substantially in addition to doctors' fees, but all patients are expected to pay something towards the cost of treatment. There is also a small emergency ward near the operating room. A ward kitchen is provided for each sex, and a sanitary annexe with sink and w.c. and a bath room to each ward. The operating room, with surgery adjoining, faces north-east, and near it is the matron's sitting-room; the upper floor contains bedrooms for matron, five nurses and six servants, with bath room, box room, and w.c. Near the main building is a mortuary and view room, which have been converted from an old building. The whole cost of the building, including engineering, electric light and fittings, all road-making, laying out grounds, boundary fences, amounted to £4,490.

CREWKERNE COTTAGE HOSPITAL, SOMERSET, was erected in 1903 on an ample and prettily laid-out site. It is planned for 15 beds, seven of each sex on the ground floor, and a special isolation ward on the first floor. The large wards for six patients are each 33 feet by 20 feet and 11 feet high, with windows east and west, and with the sanitary annexes at the ends; a bath room, common to both sexes, is entered from the corridor. Also in the front block is a board room, a staff sitting-room, the matron's bedroom, and an operating room with west and north windows. The kitchen department is on a slightly lower level and cut off by a swing door. No pantry is provided. On the first floor are three good bedrooms for nurses and servants, with bath room and w.c. The floors of the wards are of teak, and in the operating room of terrazzo. To the west of the main block is an isolated building containing a laundry, ambulance shed and coal store, and a mortuary, and adjoining is a surgery for out-patients, rather an unusual feature in this position. The cost of the building was about £4,500. Messrs. Keith Young and Hall were the architects. (See plans, p. 285.)

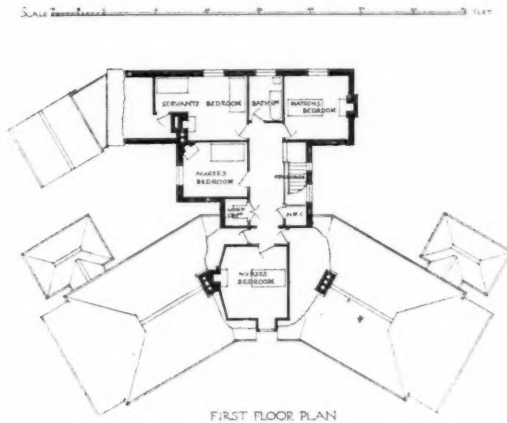
THE MACKINNON MEMORIAL HOSPITAL at Broadford, Isle of Skye, built in 1911, is of stone, and has a most compact and excellent plan, with all its details carefully worked out, as one would expect from Messrs. Keith Young and Hall, the architects. (See plans, p. 289.)

LANFINE COTTAGE HOSPITAL was built in 1904 in connection with the Broomhill Homes, near

Glasgow, and is intended for incurable cases of consumption, and is therefore rather different to an ordinary cottage hospital. The large wards, each for eight beds, are well placed to obtain the maximum of sun, and have large verandahs on the southern sides. The wards are 12 feet high and have a cubic area of 1,100 feet per bed. The sanitary arrangements are not well planned. The ward floors are of polished maple and the walls of cement painted. The windows are double hung sashes, with a fanlight over. The warming is by open fireplace, supplemented by radiators fixed under some of the windows. The cost was £4,000, given by Miss Brown,



MANCOT COTTAGE HOSPITAL. (Raymond Unwin, Architect.)



FIRST FLOOR PLAN

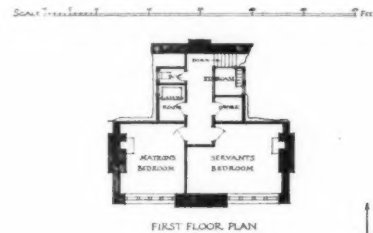


GROUND FLOOR PLAN

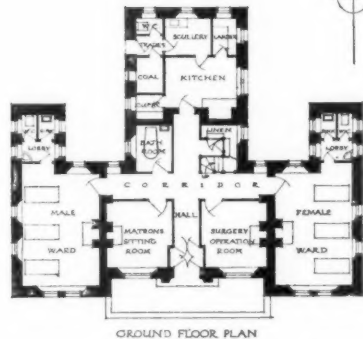
HENDON COTTAGE HOSPITAL. (W. A. Forsyth, Architect.)

of Lanfine, and the architects were Messrs. Salmon, of Glasgow.

FELIXSTOWE COTTAGE HOSPITAL was erected some ten years ago. The plan is of little interest, but is rather unusual, with, on the ground floor, ward for four beds and a single-bed ward for each sex, with separate sanitary annexes entered from separate corridors at right angles to each other, and



FIRST FLOOR PLAN



GROUND FLOOR PLAN

MACKINNON MEMORIAL HOSPITAL,
BROADFORD, ISLE OF SKYE.
(Messrs. Young & Hall, Architects.)

with the duty room at the corner. The aspect of ward, southerly, with good balcony but no cross ventilation. Also, on ground floor, a small operating room with north light, and next the entrance a waiting room and consulting room. The first floor is taken up with kitchen department and nurses' sitting-room and four bedrooms. The architect was Mr. Henry J. Wright. (See plans, p. 286.)

LARNE COTTAGE HOSPITAL, ANTRIM, was erected by the munificence of Mr. Smiley, and is for 22 beds. The plan is Y-shaped, with a centre block of two floors and side wings of one floor. The plan has an unusual arrangement of what may be called double wards—one part for six beds, and the other part can be used either as a day room or as an extension for four beds. The sanitary arrangements are inadequate and badly contrived; there are no slop sinks for emptying bed pans, the w.c.'s being used for that purpose, and the w.c.'s have no ventilated lobby, but are entered direct from the ward corridors. The operating room is badly placed, the only access to it being past the kitchen premises. The hospital is heated by open fires, supplemented by low pressure hot-water radiators. The cost was approximately £5,000; the architects were Messrs. Tulloch and Fitzsimons, of Belfast. (See plans, p. 286.)

WARDE ALDAM COTTAGE HOSPITAL was erected in 1911 for the Carlton Main Colliery Company, and is on a Y-shaped plan, with southerly aspect for the wards. The accommodation is for twenty beds—a male ward for twelve beds, a female ward for six beds, and two private wards. The sanitary arrangements are near to the ward entrances and have no ventilated lobbies; although these were originally contemplated they were cut out on account of the extra expense. The arrangement of the large wards with the duty room between them is undoubtedly the most economical plan for administration. The operating room has a good north top and side light and anæsthetic and sterilising rooms. The kitchen and offices are in the east wing, one floor high. On the first floor of the administrative block are eight bedrooms, bath room and w.c., and housekeeper's sitting-room. The floors of the operating department and the ward kitchen are of terrazzo; all the other floors of terralith, including the wards, and the architect tells me he much regrets these were not of teak. The cost of this hospital was £4,325, including £517 for the laundry and mortuary. The architect was Mr. E. Holdsworth Walker. (See plans, p. 287.)

COCKERMOUTH COTTAGE HOSPITAL.—This interesting little hospital is built on land in Park Lane, presented by Lord Leconfield, with solid brick walls and roughcasted externally. The entrance is well arranged on the west side, leaving the whole south front undisturbed for patients. The large wards are 21 feet by 20 feet and 11 feet high, and the administration rooms generally 8 feet high. The floors on the ground level are solid and raised about 18 inches above the surrounding ground. There is a splendid verandah, facing due south, for the use of patients. The building was completed in 1915, Mr. Guy Dawber being the architect. (See plans, p. 285.)

ST. ANDREW'S COTTAGE HOSPITAL was built in 1901 on a sheltered site with a sandy subsoil at the east end of Abbey Park, and facing almost due south. The plan is compact and well arranged, of a T-shape, with the wards on the southern side. There are four-bed and two-bed wards for each sex and a four-bed ward for children, all more or less with cross ventilation, but the sanitary annexes are not well arranged. On the ground floor is the matron's sitting-room, a committee room and a surgery, used also as an operating room. The kitchen and laundry are on the north side on the first floor; besides a ward for female and one for children are the matron's and nurses' bedrooms. The windows of the wards are double-hung sashes with fanlights over, taken well up to the ceilings; the walls and floor of the surgery are tiled, and all angles are rounded; the main walls are of stone two feet thick, and the roofs covered with slate. The mortuary and ambulance building is isolated and entered direct from the main road.

TONBRIDGE COTTAGE HOSPITAL was erected by public subscription in 1907, on an ample site high up and overlooking the town. The administration section was first built and used temporarily as wards, and later on were added the operation room and the two six-bed wards in ground and first floors.

Each ward is 24 feet by 20 feet and 12 feet high, warmed by open fires and radiators ; the walls and ceilings are finished with Keene's cement painted, and the floors covered with jointless composition flooring ; the bath room, sink room and w.c. are all well cut off by a cross ventilated lobby. Adjoining each ward is a nurses' bedroom, with a small window overlooking the ward. The kitchen, offices and nurses' sitting-room are on the ground floor, and in the basement is a small laundry, a mortuary and heating chamber. The total cost of the building was £3,168, and the architect was Mr. Little, of Tonbridge.

THE WEIR COTTAGE HOSPITAL, BALHAM, erected in 1913, can by no stretch of imagination be properly called a cottage hospital, as although there is only one floor of wards, and these only contain thirty beds, it is suggested that eventually another floor may be added, bringing the total up to sixty beds. The scheme is interesting as being one of the most recent additions to hospital planning, and on the lines of a small general hospital, with the wards in one-floor pavilions on the north of the administration building, with an out-patient department at one end and the kitchen department at the other. For a cottage hospital for thirty beds the plan seems very extravagant ; funds seem to have been very plentiful and everything done regardless of cost. On the ground floor are a waiting room, secretary's office and board room, an out-patient department for fifty patients, quarters for a resident medical officer, a kitchen department with servants' hall and nurses' dining room. On the first floor are eighteen bedrooms for nurses and staff. There is a separate block for operating and X-ray work, an isolated block for observation ward. The details of the plan are carefully worked out, but the dispensary in the out-patient department seems to be difficult of access for in-patients' medicines. There is no access to the operating room without passing through the anæsthetic room, and this latter is entered direct from the ward corridor. The exit for the out-patients past the board room is not good and the servery to the kitchen is not very well arranged. I believe the only reason for labelling this a cottage hospital was to get over a legal quibble, as by the terms of the late Mr. Weir's will a "cottage hospital" was given to Balham. The architect was Mr. Thomson, of Wimbledon.

I would like, before closing, to thank all those gentlemen who have so kindly lent me their drawings.

DISCUSSION OF THE FOREGOING PAPER.

Mr. JOHN W. SIMPSON, *President*, in the Chair.

Dr. S. VERE PEARSON (of Mundesley Sanatorium), in proposing a Vote of Thanks to Mr. Adams for his Paper, said that the subject had come very much to the fore in recent years. Cottage hospitals were being built all over the country. It was a set policy to build them, for several reasons. There was a movement, politically and industrially, for decentralisation. It had not gone very far yet, but the movement was growing, and had reflected itself in this direction, as in others. The medical profession during the last twenty years had seen a great development in the education of medical men. Practitioners were quite capable of performing operations which twenty years ago they would not have dreamed of attempting, hence there was a use for cottage hospitals which was not thought of a generation ago. Another point : it was hoped that, as time went on, the Garden City idea would be taken up, and that people who were treated in hospitals would have the benefit of country air much more than was now the case. That would only be possible by the development of the cottage hospital system. Another point : it was often easier to get

funds for a small local hospital than for a distant and more centrally placed institution. The Ministry of Health, and all who were interested in the organisation of the medical services, desired that the cottage hospital should take an important place in the medical services of the community. Therefore, this was a matter which it was very important to bring before this Institute at the present juncture. He could only say that Mr. Adams in his excellent Paper had dealt with the subject in a very practical way. If he might venture upon a word of criticism, perhaps Mr. Adams had not considered quite enough the question of cost. In the present-day need for economy one could not expect teak flooring, for example : the cost was prohibitive. He thought that, instead of teak or patent flooring such as terrazzo, plain concrete with a colour in it, and having where the chief part of the traffic comes a sunken area of $\frac{3}{8}$ inch in which was put cork lino, would be much less expensive, and practically noiseless. He was particularly interested to hear the points which the Duchess of Bedford put forward. Her Grace evidently spoke from practical experience. As

a sanatorium doctor and manager, he had always advocated fresh air, but he had had enough experience of cottage hospitals and sanatoriums to know that it was very uncomfortable for patients, whether they were receiving open-air treatment for tuberculosis or surgical treatment, to be in draughts. He agreed with the Duchess that it was possible to give patients ample fresh air without placing them in a draught. He was rather surprised to hear Mr. Adams give 11 feet as the height of a small ward. With the cost of materials so high, he thought the tendency should be to keep them lower than that. With regard to the finish of the wards, he had recently had some experience with the patent flat-toned paints, which had a surface very like ordinary washable distemper. With a plaster surface it was advisable to allow the plaster to dry well before application. It was often worth while to go to the expense of these flat paints. They had a nice tone and surface and were not injured by washing. With regard to the sanitary annexes, bedding and ward furniture, Mr. Adams tackled these matters in a very practical way, and he agreed with his remarks. Many cottage hospitals would have to be in districts where earth closets would have to be used; that must not be lost sight of. In a country site he favoured that system: it was a saving of expense, and, hygienically, could be made quite satisfactory. If cottage hospitals adopted that system, it was necessary to have a sink for rinsing out bed-pans after their contents had been emptied into the closet. Many patients came into hospitals to undergo an operation and were in bed during most of their stay. Therefore every facility must be given for the type of patient who could not go to the lavatory. He agreed with the Duchess of Bedford that pneumonia after anaesthetics and operations would be very much less rife if the fresh-air principles she recommended in regard to operating theatres were adopted. Wounds healed more quickly too with open-air wards free from draughts.

Dr. ARTHUR E. GILES, B.Sc., in seconding the motion, said he had been for many years exceedingly interested in the question of hospital construction, both general hospitals and cottage hospitals. He thought he had been a friend to the architectural profession, because in the case of three hospitals he had taken the initiative in urging re-building or enlargement. The first was the Prince of Wales' General Hospital, Tottenham, enlarged about the year 1903; the second, the rebuilding of Chelsea Hospital for Women by Mr. Keith Young; and the third, Welwyn Cottage Hospital, of which Mr. Adams had shown the plan. He should like to say how much he appreciated all the work and research which the preparation of Mr. Adams's paper must have entailed. It would prove to be rather a classic in the architectural world, so that people who wanted to know anything about cottage hospitals would look up Mr. Adams's paper. For a long time he had had the feeling that in hospital work there was a tendency towards unnecessary elaboration, which piled up the cost. For instance, take Charing Cross Hospital, where the doors to the operating theatre from either side were of solid marble slabs.

Could there be anything more futile in place of the ordinary wooden door? It was true that germs could not get through marble, but there were many other things less costly that they could not get through. There is, again, much unnecessary fuss made about the washing-up apparatus, and the arrangements for washing in operating theatres. The passion for having taps which could be turned on by the feet, knees, ankles—anything but the hands—was very far-fetched. Moreover, complicated apparatus often did not work well. There was a point about cottage hospitals in the future which was worth bearing in mind. In the past, there had been much provision for the hospital treatment of poor people, but very inadequate provision for middle-class patients. Wealthy people could have practically a private hospital set up in their house when they wanted an operation done; but the ordinary middle-class person was very badly off for this accommodation. In the future, if the matter was looked at aright, cottage hospitals would be a great help to the middle classes. If cottage hospitals with four to six beds for each sex of the poor had provision for about four middle-class patients, that would go a long way towards the upkeep of the hospital. People in the district suffering from a serious illness or who require an operation, instead of having to go to London or their nearest town, could be taken into their local hospital and have every proper attention, at a moderate cost. He believed that in the future ample provision would be made for middle-class people. One often sees unpractical things in a hospital. Mr. Adams pointed out a case where the verandah could not be used because the beds could not be got out on to it. And he spoke of the movable bath, an extraordinarily valuable idea, but which was much too heavy to move when it was filled for use. Every cottage hospital ought to have a proper verandah, where patients could get out into the air. Two things, however, were important. First, there must be proper exits, 3 ft. 6 in. to 4 ft. doors. Secondly, the beds should be on wheels and of such a size that they could be moved easily and brought bodily out on to the verandah without having to be taken along tortuous corridors. He entirely agreed with what Dr. Vere Pearson said as to the value of open-air treatment in cottage hospitals and other hospitals.

Mr. E. R. DOLBY, M.Inst.C.E., said that, as a consulting engineer, he had during the last 25 years devoted much attention to engineering in connection with hospitals, and had been associated with the distinguished author and a number of other eminent architects in this class of work. He would confine his remarks to the heating of cottage hospitals. Those who had studied the reports of the Fuel Research Committee would agree with him that before very long we should have an Act of Parliament prohibiting the burning of bituminous fuel in open fireplaces. It behoved architects and consulting engineers to prepare for that time, when we should only have available as fuel anthracite, coke and oil. The nation could not afford to continue to waste the by-products. He had a suggestion to make which would curtail the expense of

heating such a small place as a cottage hospital, with beds not exceeding 20 in number. He presumed there would be two large wards, one for males and one for females, with four or six beds in each. He suggested that a closed stove should be placed in the middle of the long side of each of these wards, and that the stove should contain a boiler. It should be closed on the inner side of the ward, with two doors on the outside, either to the open air, to a corridor, or to an adjoining room. The stoking and the removal of ashes should be done outside the ward. From the boiler, he should take a flow pipe to the ceiling or to the roof space, and run along and drop down to feed radiators in the single-bed wards and in the large ward, with a return pipe at floor level. The advantage of such a system was great economy in the expense; there was no cellar for the boiler house, and there was no loss from the boiler or stove, because it transferred its heat into the ward. Chimney breasts were not wanted, but a flue 9 inches by 3 inches in the thickness of the wall. If an exit were wanted for ventilation, a similar flue could be provided with an iron diaphragm between. This system did not involve bringing coal or ashes into the ward; that was done from the exterior, and stoking only required to be done twice a day. He submitted this suggestion for the cheapening of the heating arrangements of these small hospitals.

Mr. W. A. PITE [F.] said he felt that Mr. Adams's Paper would be an immense help to local authorities who were about to build cottage hospitals; it would put them upon safe and sound lines, and they would know how to succeed. He was sure their younger brethren would welcome Mr. Adams's hints. The planning of a successful cottage hospital was no easy task. All the principles, all the difficulties that had to be faced in large general hospitals, had also to be met in the case of cottage hospitals; in both cases the whole of the planning must circle round the bed. All the conditions found in an ordinary house must be swept aside, we must do away with corners, and secure as many flat surfaces as possible. The buildings need not be unsightly, even if there were an absence of ornament, for the architecture of a hospital should be an expression of the plan.

The PRESIDENT, in putting the vote of thanks, said there were one or two points he should have been glad to see taken up. One was the question of cost. Mr. Adams had shown views of extremely cheap hospitals done by his (the President's) old friend and former assistant, Mr. Leslie Moore, which, as Mr. Adams said, did him enormous credit for the economy effected. But those delightful hospitals erected for £1,000 or £1,250 were things of the past; we had to pay more than that now for labourers' cottages. What were we to do to reduce the cost of construction? He thought that, especially in hospital construction, perhaps also in educational work, we might get to work to consider whether it was now necessary or advisable to erect buildings which were to last for two, three, or more centuries. Hospitals and educational buildings were more or less out of date as soon as they were built, and

new knowledge and fresh experience were continually suggesting new ideas and new methods. We might, therefore, well consider whether a hospital should not consist of essentially two sections: first, the permanent administrative section, of which the requirements would not alter very much—a bedroom, for instance, would be much the same a hundred years hence. But the wards and the nursing part of the hospital might be erected of some light temporary material, sufficient to afford protection from the weather, and they might be scrapped every ten years. The buildings could be put up very cheaply and designed to meet the latest ideas and methods. One point mentioned by Mr. Adams gave him something of a shock—viz., that the isolation of the w.c. block was no longer looked upon as important. As an old hand he should want a great deal of persuading before he accepted that as a sound principle to adopt. With modern plumbing, to cut off the bathroom was not necessary; but they should hesitate long before interfering with the isolation of our sanitary arrangements. Dr. Giles touched upon a point which must come home to all of us—viz., the extraordinary importance of cottage hospitals for the middle classes. The possibility of getting nursing, especially for surgical cases, for the middle classes—for the civil servant, the officer, the man of moderate means who has suddenly to undergo an operation and is faced with the enormous expense of a nursing home—is a serious matter: if anything could be done to meet the needs of the middle classes in cottage hospitals it would be welcomed by the whole community.

Mr. PERCY ADAMS, in reply, referred to Dr. Pearson's suggestion as to sinking the concrete floor in the centre of the corridors where the traffic was heaviest and laying linoleum there. That was done in Germany, in their artificial staircases; they put a strip of linoleum in the tread with a brass edge round it. The German State Architect had told him that it was most effective. In ten to fifteen years they took up the linoleum and put a fresh strip down. Stone staircases, when worn down, were almost impossible to renew, but if a fresh wearing surface was put down every ten years or so, it was very satisfactory. In the corridor, too, this method was excellent; it was quiet and was better than the jointless floors. Dr. Pearson apparently disapproved of teak floors for cottage hospitals on account of expense. He (Mr. Adams) had only suggested teak as one of the materials for floors; he had mentioned other materials too; it was not at all necessary to have teak floors. As to open-air wards, the people who objected most to these were the patients. One patient said "I don't mind dying, but do let me die warm!" Dr. Giles had referred to the new forms of tap; but the architect must not be blamed; he was told to put in these things by the surgeons and doctors who wanted them. Mr. Dolby advocated a closed stove in the ward. It was undoubtedly very cheap, but the majority of patients hated a closed stove; they liked to see the fire, and he thought that wherever possible an open fire should be provided. With regard to planning, he would sug-

gest that all architects who build cottage hospitals should send plans, to one-eighth scale, to the Institute, where they could be filed in portfolios convenient for reference. Such a file would be found most useful, and he should be pleased to start it by sending thirty or forty plans.

Mr. WILLIAM A. PITE [*F.*] writes :—

The late hour precluded an extension of the interesting discussion of the Paper read by Mr. H. Percy Adams on Cottage Hospitals and upon which there was much that might usefully have been added. The consideration of the subject at the present juncture is one that is likely to serve a very useful public service, and Mr. Adams is to be congratulated upon the practical result of his labours. The exposition of cottage hospitals might possibly be thought to be of an elementary nature. This may in some sense be the case, but the elements concerned are far-reaching and somewhat elusive in character. The necessary data have to be diligently sought, considered and collated, and are matter for prolonged research calling for time and study. Hospital design has depths conditioned by departmental and administrative considerations which have to be co-ordinated, and naturally this is not to the hand of the uninitiated. The present time is calling for hospitals of a memorial character and also for extensions to existing buildings, most of which have to be retained and incorporated in some manner in the new scheme, so that architects in their several districts may be in request for commissions of this character and would do well to secure consultative guidance in a first essay of this nature. It is to such, and to the authorities concerned, that Mr. Adams's excellent Paper will come with real guidance and service in the provision of cottage hospital accommodation in rural districts. It is therefore to be hoped that it will be possible for the R.I.B.A. to add this Paper to their growing collection of publications upon hospital architecture. All hospital planning is serious, and is not only fascinating but withal is altruistic in character, and, as has already been pointed out, demands upon the part of the architect wide knowledge of the requirements. But the planning of a cottage hospital is a thing quite apart from that of the large town hospital of which it most certainly is, or should be, a microcosm abounding with perplexities and necessitating the omission of characteristics which may not be considered to be essential or possible. One clamant essential, however, is always present and cannot be burked, and that is the practical unit in the plan—the patient in the bed—on whose account the whole organisation and administration of the little hospital is dependent. This is the true centre upon which everything radiates. A cottage hospital, however excellent, cannot possibly by any means expect to have anything like the maximum of amenities secured by its bigger relative of the town, but it is in that direction that it must generally orientate. Committee and staff may in most cases know but little of the actual requirements, but this lack of knowledge will in most cases be made up by active enthusiasm and interest, but they will need to

be shepherded with real knowledge by the architect, and there is generally at hand a keen professional physician or surgeon whose welcome assistance may be relied upon.

Mr. W. A. FORSYTH [*F.*] writes :—

At the close of Mr. Percy Adams's very interesting Paper upon Cottage Hospitals on the 14th instant, very little time was left for discussion. I should like to be allowed to add a word of appreciation of all the trouble and pains he took to give us so much information. It was especially interesting to hear Mr. Adams' criticism upon the collection of drawings which were displayed at the meeting. It was further gratifying to observe his optimism in stating the cost of these buildings at 2s. 6d. per foot cube. I was hoping, however, that something would have been said as to the future of cottage hospitals, because, from my recent experience on this subject, it seems to be generally understood that medical hospital practice is undergoing considerable changes, largely as the result of war experience and the consequent development of medical skill. Our President's trenchant observations were the only remarks which pointed in this direction, but he based his statements upon the question of cost. He hinted that cottage hospitals of the future would have permanent administrative buildings, and temporary wards which might be burnt down after a certain period of use. I find that this idea is gaining ground, but that it is not due to the question of cost so much as to the changes in medical requirements. Large numbers of practitioners have had special experience of the hut hospital during the war, and I have not met one yet who has said anything against their efficiency. Apart from their economical side they have advantages in lending themselves rapidly to extension, alteration and disconnection, yet conforming admirably with the sentiment of a cottage hospital. Such buildings have, of course, one storey, and in country places the site invariably is spacious enough to admit of their adoption. In large towns, having restricted areas, these forms of buildings are not so readily to be adopted.

There are four considerations which appear to me to be forcing a change in our outlook as architects towards cottage hospitals :—(1) Cost ; (2) Changes in medical practice ; (3) Adaptability to alterations ; (4) Changes in nursing arrangements. With regard to cost, it is quite clear that the refinements of modern hospital building have to be given up, such as rounded corners as well as impervious and polished walls. In wards which are nowadays open-air places, I can see no objection to the use of unplastered brick surfaces, lime-washed or distempered. The only brick in general commercial use at the present time is one which does not lend itself conveniently to the retention of good plastering, but it offers an excellent uncovered surface which can be distempered. It is unnecessary to paint plastered ceilings for the same reason, and if these ceilings should be lathed with wood it is better that they should not be so treated. I know of one very important sanatorium where the greatest care was taken with the building. The tiling

on the roofs was bedded in mortar, the rafters were felted and boarded and the plaster ceilings were all painted; yet dry rot set in the timbers, because the air had thus been shut out of the roofs. It is unnecessary further to mention details where economy in cost can be effected. In any case, medical practice does not exclude the building of less permanent structures.

With regard to the changes in treatment of patients, I find that medical men are asking for smaller and more numerous wards. This is essentially consistent with cottage hospital design and will, I hope, have its effect upon future buildings. These one-storey buildings, besides coming within reasonable limits of expenditure, offer great advantages in the experimental lay-out of a cottage hospital and are especially economical in hilly sites. They lend themselves admirably to the inclusion of verandahs and if properly cross-ventilated can be reduced considerably in cubic capacity.

As to nursing considerations, it is now accepted that nurses are not required to work the long hours they have previously been accustomed to, and, in common with other workers, their pay must be proportionate to the general cost of living. A great deal is yet to be done in labour-saving details in nursing work; nurses' accommodation has largely to be increased.

Many of the plans that Mr. Adams exhibited showed the sanitary blocks in inconvenient positions and a long way from the beds, involving excessive fetching and carrying of nursing utensils. It is most important to centralise these places in relation to the beds. In conclusion, and in again expressing thanks to Mr. Adams, I feel his Paper must be regarded as a good closing chapter to the record of cottage hospital practice in this country. A Paper is now required dealing with its future treatment.

It appeared to me that all the drawings shown to the meeting, while representing much admirable work,

were really overloaded with architecture and were in a general way fettering and impeding the simple working of a hospital by the medical and nursing staff.

Mr. LESLIE MOORE [F.] writes :—

After hearing Mr. Percy Adams's excellent Paper on Cottage Hospitals, I feel the subject invites the following notes.

The term cottage hospital is elastic, but the "cottage" idea should, I think, always be kept in view; the more homely the building is the better, for the inherent prejudice of country folk to such institutions is thus overcome.

A high percentage of cases dealt with in a small country hospital are such that chiefly need careful nursing and dieting in hygienic surroundings which cannot be obtained in the working-man's cottage, and the function of relieving the larger hospitals of mild cases and convalescent patients who appreciate the possibility of being visited by friends should not be overlooked.

The necessary requirements for dealing with accidents and surgical cases are, of course, imperative, though much depends on the local practitioner as to the use made of the operating theatre.

More often than not the initial expenditure on the building is limited, and the problem of designing *multum in parvo* and eliminating the non-essentials of the larger type of hospital might well be further discussed.

The maintenance and annual cost of upkeep of the building is of great importance in the selection of materials, and in planning the possibility of extension should receive primary consideration.

The verandah doors at the Staines Cottage Hospital, to which attention was drawn, do permit of the beds and wheel-chairs being taken out on to the verandah, though the former have not wheeling casters. The staff bathroom and closet are shortly to be installed on the first floor, as originally planned.



COTTAGE HOSPITAL, WELLINGTON, SALOP. (Leslie Moore, Architect.)

ARCHITECTURAL COPYRIGHT.

Counsel's Opinion.

The Practice Standing Committee had before them recently a case in which the circumstances were as follows :—

In 1919 a firm of architects, members of the Institute, prepared plans for a house which was duly erected; they subsequently noticed another house being erected to the same design, and on enquiry found that the plan for the second house had been submitted to the local authority by another firm of architects, not members of any professional body, and that with slight alterations it was a tracing from their drawing.

As the Practice Committee were not aware of any decisions yet existing for guidance in this matter, it was decided to recommend the Council of the Institute to obtain counsel's opinion. This has now been received, and on the recommendation of the Committee the Council have ordered it to be published for the general information of members.

Opinion.

An architect has copyright in :—

1. His original drawings and plans.
2. The building or structure constructed therefrom.

No registration is necessary in order to secure this copyright. Copyright may be infringed by

1. An unauthorised reproduction of the drawings and/or plans.
2. An unauthorised construction of a building which reproduces in whole or in part the original artistic character or design of the copyright drawings and/or plans and/or building or structure.

The remedies for infringement are :—

1. An injunction to restrain the erection of any further building or structure not yet commenced which shall infringe the copyright. No order will be made to restrain the completion or order the demolition of a building already commenced. (Copyright Act 1911, Sec. 9.)
2. An injunction to restrain any further reproduction of the drawings and/or plans.
3. Delivery up of all infringing drawings and/or plans.
4. Damages or an account of profits. These are alternative remedies, and a plaintiff must elect which to take. The measure of damages would be an amount equivalent to the architect's fees which the plaintiff would have been entitled to if he had been employed in connection with the building.

An account of profits would in my opinion entitle the plaintiff to recover the net profits earned both by the architect and the builder in connection with the erection of the infringing building. A plaintiff would probably elect to take an account of profits.

The relevant provisions of the Copyright Act, 1911, are Sections 1 (3), 2 (1), 9, 35 (1), "artistic work," "architectural work of art."

If the facts are as stated in the plaintiff's letter, and if their plans had, as I assume they had, an original artistic character or design, an action lies at their instance against the firm of architects and the builders for an injunction, delivery up of plans, and an account of profits.

CORRESPONDENCE.

The Architectural Association School : Group Training.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Mr. Selfridge's address at the Architectural Association on Commercial Architecture received wide notice in the public Press, and it is perhaps fortunate that Mr. Selfridge tactfully confined his remarks to the shortcomings of commercial patrons.

It is undoubtedly true that ignorant or indifferent patrons restrict the opportunities of architects, and may prevent them doing the best work that they are capable of; but can this be made an excuse for really bad work? Short of ignorant and dictatorial interference in matters of design on the part of the client, and weak acquiescence on the part of the architect, I cannot see that the client can be held responsible for really bad design. If all architects were fine designers in addition to their other necessary qualifications, it would be impossible for patrons to find architects capable of erecting bad buildings.

It is interesting to notice the quality of architecture produced in this country during the period of individualism which has prevailed now for nearly a century, during which every man has been encouraged to "express his individuality" in any style, or lack of style, he chooses. That fine individual work has been done no one can deny, but these efforts stand out as exceptions, and the average quality of work has been extremely poor, and far below the standard reached in previous ages.

I attribute this to lack of collective effort. The fine work of past ages was produced when tradition was a living force, and tradition seems to me to be collective effort and collective thinking; architects worked on parallel lines, were inspired by the same ideals, and accepted the work of their predecessors as a starting-point for further developments; the result was cumulative. In science we have these conditions operating at the present day; such as, for instance, mechanical engineering. Anyone who has watched a large complex machine at work cannot but feel astounded at its amazing complexity, and wonder how the brain of man is capable of such ingenuity. Yet this is not and could not be the work of one man's inventiveness; it is the cumulative result of many men's work extending over generations, every individual adding his small contribution, and in the end producing a result far beyond the power of a single individual to conceive.

In architecture independent individualism has had a good run, and has given us so much bad architecture that it seems necessary to look about for new methods. Is it not time to change our system, and to get back to collective effort? This is not possible under the pupilage system at present, because every office ploughs its lonely furrow and goes its own sweet way, regardless of what others are doing; but it is to large schools, such as that at the Architectural Association, that I think we may look for an improvement in this respect, because here we do get collective effort and collective thinking.

A school forms a tradition of its own, and when the students take their places in the profession as practising architects, we shall have groups of architects trained under similar conditions, inspired with common ideals, and influenced by a school tradition common to them all.

It is too early yet to see the result of this system in England, but judging by the results obtained in America, where this group education has been in longer operation, I feel confident that as soon as it has been given time to make its influence felt, the general average quality of architecture in this country will very considerably improve.

For this reason alone the Architectural Association school seems to me to deserve the whole-hearted support of the profession, and indeed of all interested in the welfare of architecture.

It is the largest architectural school in the country, it is run entirely by the architectural profession, and it is now compelled to issue debentures to the tune of £20,000 to pay for absolutely necessary extensions of premises. Need I say more?

G. GILBERT SCOTT [F.].

"Dynamic Symmetry in Ancient Architecture."

St. John's Wood, N.W.: 4 March 1921.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Mr. Hambidge's lecture finished so late on Tuesday night that many in his audience must have refrained from raising questions on which, had the time been opportune, it would have been of interest to have had the lecturer's views.

The relation of mathematical principles and geometry to design in architecture is, of course, no new thing and must have commanded attention since the day when primitive building developed into architecture. The various editions of, and commentaries on, Vitruvius and the writings of some, at least, of the Renaissance authors contain references to this aspect of architectural design, and even theories of its supposed connection with musical sounds and rhythm. The covering, or enclosing, of representations of buildings, in plan, elevation, and section, with squares, triangles, and circles has incidentally been productive of extremely beautiful sixteenth and seventeenth century woodcut illustrations of architecture, in addition to serving the more important purpose of showing in a

clear and simple way—what no one disputes—that the basis of architectural design, whether consciously or unconsciously, is geometric, and to that extent has its arithmetical side. I think it about as likely, as regards the general inception of designs in their earlier stages, to have been—in all ages—as much the latter as the former. All ornament and pattern-making—which monumental planning very largely is—is geometric, even though quite commonly evolved without definite consciousness of that fact. One can hardly imagine Bramante, Peruzzi, Raphael, and Michelangelo, when producing their varied and beautiful plans for the new St. Peter's at Rome, being concerned with mathematical or geometric ratios as such; and it seems to me there is great danger in setting aside—as discussions on mathematical principles in design inevitably tend to do—the idea of personal inspiration, controlled by judgment, as the basis of æsthetics in architecture. If, as regards Classic Greek remains, no two buildings are to be found alike, wherein consists the special significance of mathematical ratios as explaining ideal perfection of proportion? Which numerical standard are we to accept, moreover, to form opinions of the relative values of ancient examples, and for our guidance in the future? It is certainly difficult to conceive an inspired artist conjuring with figures to produce a masterpiece; nor do I credit Mr. Hambidge with thinking so. While, however, there may be little parallel between the works of Ictinus, for example, and, say, Bramante, Vignola, Palladio, and our own Inigo Jones, there is reason to suppose, from the evidence of their drawings and work, that in the conception of the undoubtedly beautiful buildings they designed or produced they were not unduly trammelled, if at all, by ideas of numerical relations, or, shall we say, surd quantities. Whether their work can be regarded as of the static or dynamic symmetrical variety I frankly do not know, nor how such obscure distinctions are determined. If Wren in the case of St. Paul's, Dance the Younger in old Newgate Prison, and Elmes and Cockerell in their splendid St. George's Hall at Liverpool, did not, so far as we know, apply arithmetic ratios—apart from intuitive judgment and sense of proportion—in producing their buildings, why need we justify or explain the designing of Greek art, with its quite sufficient variety, on any such grounds? The subtleties of geometric spacing may quite appropriately be brought in to give perfection and exactitude to a design already freely conceived by its author, and may greatly assist, and partially explain, results arrived at in architecture. But its right place seems to be where our sole classic authority, Vitruvius, put it, to "determine those abstruse questions wherein the different proportions of some parts to others are involved"—in other words, to be a useful accessory and no more. Both architects and their sculptor *confrères* will do well to resist any weakening of the position that a work of art is essentially the product of personal inspiration, knowledge, and judgment, and that, for that reason, the

sculpture of a Pheidias, Michelangelo, or Alfred Stevens was good because of the possession of such gifts or qualities by those men—the qualities, in fact, to which we must ultimately revert to explain all really great art, and which, in what constitutes its essential value, can certainly never be the product of any mechanical or mathematical system.

There may be, and probably is, a variety of opinions about these things. There can be only one as to the beauty and value of Greek art in its finer phases. Mr. Hambidge, in directing attention to it again, even from the special standpoint he has selected, earns the gratitude of all who care for

“Fair Greece! Sad relic of departed worth!
Immortal, though no more!”

If some of us are inclined to urge views which may seem in conflict with what we understand, or perhaps imagine, his to be, he will, I am sure, believe we are still not other than appreciative of his labours in the cause he has chosen, and the definite value of any work which stimulates interest in a subject of supreme æsthetic importance.—Faithfully yours,

FREDK. R. HORNES [F.].

Common Sense in Building Construction (p. 261).

To the Editor, JOURNAL R.I.B.A.—

SIR,—From Mr. Robertson's letter it would appear that I must have failed completely to make my meaning clear; but the point at issue seems to be comparatively simple. If the upper floors of cottages are to be designed to a factor of safety of about 7 (1,000 lb. per square inch) under a *minimum* load over the whole floor, such as would be caused by auction sales, stacks of root crops, or coal, then obviously the whole of even our old standards must be revised, even Tredgold. If, however, it should be considered reasonable to design for normal loads, with a factor of safety to deal with abnormal loads or misuse, then data of real normal loads are desirable, and a photograph of a bedroom carrying 28 lb. per square foot over its whole area would be instructive. The floor loads in offices are scarcely lighter than those in bedrooms, yet the investigation of the super-loads in the rooms of three office buildings in Boston, U.S.A., including the greatest known number of occupants, fittings, books, and all furniture, except safes, gave an average of 17 lb. per square foot. Twenty-six per cent. of the rooms exceeded 20 lb. and 12·4 per cent. exceeded 25 lb. The heaviest *local* loads were found to be full bookcases and nests of drawings drawers, the latter weighing about 52 lb. per foot super, 3 feet high when full.

But, whatever may be the standard of strength or stiffness, and whatever may be the floor loading assumed, the important point to the architect is that if the span be halved, whether by a wood or steel beam, or by a partition, then one-half the timber required for floor joists is immediately saved; because for any given loading per foot super, any given stress, and any given ratio of deflection to span, the depth of joists—

and therefore their cube—must vary directly with the span.

It should, perhaps, be pointed out that the floors shown do not weigh 10 lb. per foot, as stated by Mr. Robertson.—Yours etc.,

P. J. WALDRAM, *Licentiate*.

* * Attention has been drawn to a remark at the end of Mr. Waldram's letter in the JOURNAL for 29th February replying to criticisms on his article “Common Sense in Building Construction” (JOURNAL, 5th February).

“It is somewhat unfortunate,” Mr. Waldram says, “that the Ministry of Health Specification permits alternative sections, but of equal *area*, not of equal strength or equal stiffness.” A correspondent points out that Mr. Waldram in making this statement ignores altogether the words “and suitable depths” in the opening paragraph of Clause 90 of the Ministry's Specification, which reads: “Construct the wood floors with joists of the following scantlings or with joists of equal *area and suitable depths*.” The clause then specifies the depth in inches (for lengths of bearing ranging from 5 to 12 ft.) according to the breadth of joist.

It is understood that the Ministry have no objection whatever to beam floors, but encourage them, provided that the beams are calculated in connection with the recognised formulæ and that the joists are suited to the various spans as set out in the specification.—ED.

THE GARMENT OF LIFE.

Under the heading “Beauty Made and Marred,” *The Times* of the 15th inst. published an account of its Special Correspondent's interview with a group of artists who have sketched out a scheme for guarding and extending the domain of beauty, i.e., to bring art from its present position on the mountain tops and to introduce it to the market place; to prove that art need not be confined to the picture gallery or museum, but that it should permeate all the details of our everyday life. The promoters are men whose names, *The Times* correspondent says, are household words, although they prefer to remain anonymous in case they should be suspected of self-advertisement. The following items show the scope of their proposals:—

(1) The preservation by the Government of the finest specimens of British sculpture of all periods in the United Kingdom; and the foundation of a museum, like the Trocadero in Paris, of casts of English carving, modelling, bronze work, etc., whereby a vast amount of irreplaceable art, which otherwise will have disappeared in 100 years under the ravages of time, would be saved.

(2) The formation of a Committee of Taste, consisting of painters, sculptors, and architects, irrespective of such bodies as the Office of Works and the Westminster Borough Council, who should consider sites for statuary, fountains, public shelters, seats, and kiosks.

(3) The formation of a Standing Committee of Designers, to be consulted in street decoration of Greater London on occasions of national and Imperial importance. The advice of this committee would be at the service of the Lord Mayor-elect of London in fresh and beautiful schemes for his progress through the streets.

(4) Any innovations for the beautifying of national feasts and ceremonies would be described by the Committee of Taste for the benefit of the public—to tell them of their character and show them their practicability.

(5) The execution by eminent artists, aided by their students, of frescoes in important public buildings, and the fostering of the cult of bright and luminous colour in such undertakings.

(6) The alteration of proportions and improvement of design in such street objects as lamp-posts, letter-boxes, sand-bins, railings, posters, the ground-floor elevation of public-houses, public bridges, flashlight advertisements, and in the dressing of shop windows.

If, say the promoters, this programme seems here and there to touch on ground already covered by art guilds and societies, nobody should conclude that those who have drawn it up wish to ignore other pioneers. On the contrary, they insist on the value of their work and the talent they draw upon. At the same time, they observe that the Government and official bodies generally do not avail themselves of this reservoir of artistic help; and they aim at establishing a recognised relation between Government and some consultative Department of Taste.

"Take the cathedrals, to begin with," said one. "A great deal of deterioration is going on there. If we are not careful we shall find it too late to tackle them. For example, the west front of Wells. People are apt to be afraid of meddling with work of that kind—first, on account of the cost, then of the risk of spoiling by casting for records. But it has been done all over the Continent, and it can be done here. Reims Cathedral should warn us of the need of preserving casts of fine sculpture. Much that has been destroyed there cannot be replaced, because they do not possess the moulded records."

"Town planning," another put in, "is a second big way in which the committee could assist. Here we could take a lesson from the Americans in Washington. Washington, I believe, was designed by a French architect, and they are developing it to this day on the lines he laid down. Our great opportunity came after the Fire of London—and we lost it. If Wren's scheme had been carried out, London would have been the most beautiful city in the world. When we pull down Charing Cross bridge we shall get another great chance. Surely those who make it the aim of their lives to look for beauty—surely they could lend a hand in seeing the chance is not missed. If the people understood architecture they would be better able to keep a proper eye on their own interests in these things."

"Why don't people understand architecture?" I asked.

"Perhaps that is the fault of the architects. I mean the architects have failed recently to set us a standard. There is nothing to go by. Why, the very word 'art' means to thousands nothing but painting. To most folk pictures, and pictures alone, are art. Yet painting enters far less into the public life than architecture."

In *The Times* of the following day the same Special Correspondent writes:—

It is possible that from the proposals above outlined may begin a renaissance of the appreciation of art by the people. Their potential importance has already been realised by distinguished men who are—at present—outside the movement.

Yesterday, for example, I went to see Mr. John W. Simpson, the President of the Royal Institute of British Architects. Mr. Simpson is peculiarly fitted to discuss the connection between beauty and utility. It is his life work to plan beautiful buildings for an everyday purpose, and

two examples of his work that hang on the walls of his office crystallise that work. They are the designs for Haileybury College and Lancing College, and every line goes to show how it is possible to make the useful at the same time beautiful. He began by referring to the proposed Committee of Taste.

"Such an idea," he said, "is admirable. So long as official bodies have the ordering of our public monuments, so long will there be no taste in the monuments and the choice of their sites. Moreover, there will never be economy." The formation of a committee of men to take their place who really understood their business would be an undoubted boon.

"With regard to the improvement of common objects," he continued, "no one with any artistic sense at all can deny that it is very necessary. Personally, however, I find it rather difficult in some cases to separate beauty and utility. If an object carries out its functions in the best possible way, even though it may not be intrinsically beautiful, then I think that that object is a work of art. A battleship is a work of art because it carries out its functions in the very best possible way. Take a letter-box, for instance. I think a letter-box is a very beautiful object, because it is so exactly fitted to its purpose. It is round—for the safety of the passers-by. It has a curved top in order to drain off the rain. It has a firm base, a flap over the aperture to keep letters dry when they are being put in on a wet day. There is nothing superfluous at all. To my mind our British letter-boxes are infinitely more artistic than any to be found on the Continent."

"For our lamp-posts I cannot say as much. Those in the suburbs are too plain, and some of the more ambitious ones in the city are too ornate. The average English railing is a very ugly creation. With regard to posters, I must admit that the average hoarding is not exactly an object of beauty. I think, however, the Underground Railways have been to a certain extent the forerunners of the Committee of Taste in that matter. Nearly all their posters are in good taste, and some of them are undoubtedly works of art."

Mr. Simpson also admitted the need of improvement in the planning of public-houses. He pointed out, however, that at last steps were being taken in this direction. The Institute of which he was President had recently received applications from the Worshipful Company of Brewers asking for plans for the erection of an improved form of public-house. A competition had been held, and the result of that competition would soon be announced.

"Personally," he added, "I hope that any improvement will take the direction of increasing the comfort of the buildings and their window space. The nearer we approximate to the style of the Continental café the better I think it will be."

"Finally," said Mr. Simpson, "I would like to make one suggestion. It is proposed that the Committee of Taste should be composed of painters, architects, and sculptors only. I fully agree that there should be no officials on such a committee, but I do think that it would be wise to add to it a few people who are not artists, sculptors, or painters. In America, where in many cases a somewhat similar idea has been put into practice, it is always customary to have laity on such a committee."

A third article by the same writer appeared in *The Times* of the 17th inst. :—

None are more zealous, he says, for the beauty of London than certain members of the Royal Academy. I have talked

with nobody keener on the larger organization of art than Sir Reginald Blomfield, R.A., the distinguished architect.

There was no need to explain the scheme to Sir Reginald Blomfield. He told me at once that he had read both the articles which have appeared in *The Times*, and cut them out to be kept for reference. The whole subject, he went on, was extremely important, and must be dealt with sooner or later—probably sooner. Then, with a smile: "I cannot indicate my opinion of its importance better than by telling you that when I read the first article I said to myself, 'These people are up against a bigger thing than perhaps they are aware of.' The issues, indeed, are so far-reaching that they cannot be dealt with in any summary way."

When I pointed out the tentative nature of the proposals and the value of representative views on them, Sir Reginald Blomfield eagerly assented. "We want expressions of opinion all round, to try and arrive at what is really best for the arts. To my mind it is the duty of those who realize the seriousness of the question to say what they think. We artists ought to be grateful when a paper like *The Times* directs public attention to the relation between art and the community. It is so seldom that art receives any attention."

"On the subject generally," he continued, "the alternative seems to be between a Ministry of Fine Art—to which some of us are strongly opposed—and an Advisory Commission on the lines of the American Fine Arts Commission at Washington. This is limited in number, and composed of the most representative men they can get hold of; it is consulted in all important matters of art affecting the public. I hold strongly that, if such a body is to have any real weight and authority, it must be limited in number. A great deal hangs on that condition—probably more than meets the eye; and the majority, at any rate, of any such body should be trained and competent artists."

"You agree that the people and the arts are not sufficiently related?"

"That is the very point of the matter. The scheme which is set out raises the whole question of the relation of the State to the arts. There is no doubt that this relation requires further definition than it has at present. Not that this means any stringent State control. The regeneration of the arts of France in the seventeenth and eighteenth centuries was very largely due to their complete reorganization by Colbert in the reign of Louis XIV; but the conditions are so different now that this analogy hardly holds, and the situation requires to be controlled very carefully."

Sir Reginald Blomfield went on to say that the time had come for taking up the subject seriously. But it was very important—vital, in fact—that the opinion of practising artists should be taken. Our English habit was to hand over these things to the amateurs. Yet the beauty of our streets, our squares, our public buildings affected future generations much more than local politics. The amateur, called on to deal with questions of art, made mistakes because he was not familiar with the practice of the arts and their limitations and conditions. The opinion of practical artists ought to be taken. Such problems should not be settled over their heads, for the control of the arts was involved. The Royal Academy was the proper body to be consulted.

OBITUARY.

Arthur Hill [R.F.].

Arthur Hill was born in Cork on the 8th June 1846. His father, Henry Hill, also an architect, sent him early to the local School of Art, while a little later he attended a private school for his general education, proceeding afterwards to Queen's College, Cork, where he graduated Bachelor of Engineering in the year 1869.

About this time he went to London, and served for a short time in the office of the late Thomas Henry Wyatt, who was then building the Liverpool Cotton Exchange. Outside pupilage facilities for the study of architecture were few in those days. My father, however, went to University College, where he sat at the feet of Professor Hayter Lewis, and gained, in 1868, the Donaldson Silver Medal. He became a Life Student at the Royal Academy, but, I think, no classes were held then. However, the Silver Medal was awarded to him in 1871 for his measured drawing of the round part of the Temple Church. I believe he attended a design class at the A.A., of which he became a member in 1867, and he also spent a considerable amount of his time drawing at the West London School of Art.

The sketching *furor* of the period did not leave him unscathed, and he made several Continental trips for this purpose, chiefly under the guidance of Edmund Sharpe, of which an excursion to the West of France, ending in the publication by the A.A. of a book, *The Domed Churches of the Charente*, was the most notable. Indeed, the love of sketching never left him, and he was one of the most regular members of the A.A. Annual Excursion for the rest of his life. His most serious study of old buildings was, however, made in his native land, where he was deeply interested in ancient Irish architecture, and particularly in the Celtic development of the Romanesque. He made careful surveys of some of the best examples, publishing four monographs upon them, for which works he received two silver medals as an acknowledgment from the Institute. These were: Ardferth Cathedral, Co. Kerry (1870); Templenahoe, Ardferth, Co. Kerry (1870); Kilmalkedar, Co. Kerry (1870); Cormac's Chapel, Co. Tipperary (1874).

In the early 'seventies he also commenced to practise with his father, the firm being known as Henry and Arthur Hill. During the greater part of this period his work was strongly influenced by the Gothic revival, early French and ancient Irish features giving him his chief inspiration. Among the best examples of this period were the fronts of Nos. 31 and 80 Patrick Street, Cork; the former unfortunately destroyed in the burnings which took place last December, and the latter recently pulled down to make way for a cinema theatre. The Munster and Leinster Bank, at Kilmallock, Co. Limerick, is an example showing the influence of some ancient local work in its details. The School of Art, Cork (about 1885), was the last important work

carried out under the partnership, and in this I fancy Henry Hill took but small part. In this design Gothic gave way to the ideas of the Renaissance, and I do not think my father, except in some small church work, ever made use of Gothic details again.

Henry Hill died in 1887, after which my father practised alone for many years, carrying out some of the most important works that were done in the South of Ireland during that period. The Metropole Hotel, considerable additions to the North Infirmary, Victoria Buildings (considerably damaged in the recent burnings), Nos. 13 and 16, Patrick Street (both destroyed in these outbreaks), the *Cork Examiner* offices and printing works, as well as a great many shops and commercial buildings in Cork and the surrounding country towns, were done by him. He also did a considerable amount of small domestic architecture, of which the most important examples are the Red House, Castletownshend, Co. Cork, Redgarth (his own), and Lacaduv, in the suburbs of Cork.

In the year 1909 he took me into his office, and the Science Laboratories at University College, Cork, the Technical School and the Head Office of the Munster and Leinster Bank were among the chief works which we jointly executed prior to the outbreak of the war.

My father was always very zealous in the cause of Architectural Education, and held the post for many years of Lecturer in Architecture at the Queen's (now University) College, Cork.

In the year 1917 he retired from practice as the result of a very severe paralytic seizure, but after a slow and tedious recovery he returned to his pencil; and, in spite of very impaired powers, his chief delight still lay in designing "*chateaux en Espagne*."

He died on 24th February last, having finished his last little drawing only five days before.

HENRY H. HILL [A.].

Mr. ALBERT E. MURRAY, R.H.A. [F.], of Dublin, writes:—

I am glad to have been able to number the late Mr. Arthur Hill among my friends. Though we both lived in Ireland, strange to say my meetings with him were more frequent in England than here. He has stayed with me in Dublin; I have partaken of his hospitality at his charming villa in Cork, a villa designed by himself with all the real comforts of a real home, the planning of which reminded me of the work of the late Geo. Sherrin, who was such an able exponent of domestic architecture. Mr. Hill had a distinct personality, adhering, even in his dress, to old times rather than modern. He was an artist in every sense of the word, caring little for the business side of his profession. He was a constant attendant at the Architectural Association Excursions, and by his genial manners endeared himself to all who knew him. On these excursions he was generally accompanied by his friend, Mr. Noblett (who, though not an architect, took a great interest in the proceedings, to which he brought much life and spirit!).

It is to be regretted that Mr. Hill's practice did not lie in a locality that would have given him more scope for his talents. He had little opportunity of giving to the world the inspirations that he undoubtedly possessed. His last work was the rebuilding of the Munster and Leinster Bank in Cork, which has been illustrated in the building papers, and is a proof of what he could have done if opportunity offered. He was a master of music, played well on the organ and piano, and had a thorough knowledge of the art.

ALBERT E. MURRAY [F.].

Edmund Harold Sedding [F.].

Edmund Harold Sedding, of Plymouth, who died on the 21st February, had been a Fellow of the Institute since 1901. The son of Edmund Sedding, Architect, of Penzance, he served his articles with his uncle, John D. Sedding, Architect of All Saints' Church and Church House, Plymouth; All Saints', Falmouth, and St. Ewyn, Hale. In 1884 Edmund Sedding won the Royal Academy Medal for Measured Drawings, and in 1886 he carried off the R.I.B.A. Medal for his Measured Drawings of Grantham Church and of the Tower of St. Magnus the Martyr, London Bridge. These latter drawings are hung on the walls of the Black and White Room, Victoria and Albert Museum. In 1886 he took the English Travelling Studentship for Design at the Royal Academy, and in 1887 was awarded a special Pugin Medal for sketches. He started practice at Plymouth on the death of his uncle in 1891. The following account of his work appeared in the *Western Morning News* of the 23rd February:—

Mr. Sedding restored many churches in Cornwall, including St. Kevenne, St. Mawgan-in-Meneage, St. Blazey, Marham-church, Lansallos, St. Ives (partial), St. Erme, Falmouth Parish Church, Morvah, Tremaine, Chacewater (reconstruction), Lanteglos-by-Fowey, and Crantock, near Newquay. The last mentioned was a notable achievement. The ancient collegiate church, refounded in 1224, was in a ruinous condition. Its restorer left it a thing of such beauty that many travel from afar to see its elaborate interior. Only two small fragments of the old screen remained, but they sufficed to enable a restoration of the whole to be carried out. Large additions were also made by Mr. Sedding to the Home of the Epiphany at Truro, and later the chapel was built from his design. The same year, 1907-8, Lis Escop (the home of the Bishops of Truro) was enlarged, and the chapel added during the episcopate of the late Bishop Stubbs. For that Bishop Mr. Sedding designed the diocesan staff. The crook and figures were executed by George Sedding, who was killed in the war. The wood for the staff was provided by Bishop Stubbs from the old Ely Cathedral stalls. At St. Germans Priory Church the great east window and the massive west door, with its bronze work, were carried out by Mr. Sedding for the Countess of St. Germans. Additions were also made by him to Ladock Church, and the towers of St. Gennys, Cardyham, and Fowey were repaired. The new chapel of the Truro Training College for Misses was also built about that time.

Careful restorations were made of the old Cornish screens by Mr. Sedding at Madron, St. Winnow, St. Budock, and the splendid coloured screen of a sixteenth century type at St. Buryan, where the detail is seen transfused with that of the Renaissance. New screens were designed for the churches of St. Stephen's, Devonport; St. Mary's, Highweek; St. Mary Magdalene, Launceston; Marytavy, Fowey (a memorial of Canon Purcell's jubilee as vicar), Stratton,

and St. Erth, and Netley, near Southampton. In St. Erth Church the south chancel aisle was very elaborately fitted up with reredos, altar, roof, screen, and carved benches in memory of the Hawkins family. In one bench-end is a careful portrait of Bishop Stubbs with mitre and staff in high relief. This, like very many of Mr. Sedding's designs in wood and stone, was carried out by Rashleigh Pinwill and Co., Plymouth.

Mr. Sedding's most important work was the new cathedral at Dunedin, New Zealand. In 1906 the Primate of New Zealand (Bishop Neville) selected him to make the designs for it, and two years later he was invited out to the Dominion to inspect the site. It is a commanding one, with a slope of no less than 22 feet in the length of the building, about 220 feet. The nave has been erected, and the full designs of the cruci-building, with a massive central tower, have been provided. Different kinds of Oamru stone have been used, and for the nave (which has cost about £30,000) and the vestries underneath materials have been used from the colony. The nave has many original features, and the west front is imposing. Over the west door effigies of Bishop Selwyn, Bishop Harper, and Bishop Neville have been placed in niches.

In Devon Mr. Sedding restored the churches of Dartmouth, Broadhempston, Sparkwell (reconstruction), Prince town, Marwood, and Kingston, and the elaborate reredos at Ermington. His design for the large and new church of St. Mary, Abbotsbury, Newton Abbot, won in a competition, was carried out at a cost of £10,000. The drawing was in 1910 hung in the Royal Academy. In 1907 Mr. Sedding partially restored the Norfolk churches of Haddiscoe and Wheatstone, the Suffolk church of Great Pricet, and the Essex parish church of Raylet, near Bowers Gifford. Work in Somerset included the complete restorations of Mark Wear (for Mrs. Luttrell, of Badgeworth Court) and Pawlett.

In 1909 Mr. Sedding published a volume on *Norman Architecture in Cornwall*, which is the acknowledged authority on the subject. Its preparation entailed not only much research, but the visiting of about 200 churches in the county. Modestly he described it as "a handbook of old Cornish ecclesiastical buildings." To it he added notes on 40 manor-houses and five castles in Cornwall, and a chapter on the Saints of Cornwall. An attractive feature of the book is 160 plates, reproductions of his own drawings. An accomplished draughtsman, he combined meticulous accuracy with artistic treatment. The volume is most valuable as a painstaking record of the Norman work remaining in Cornish churches after a lapse of eight centuries.

As a lecturing member of Plymouth Institution, Mr. Sedding gave addresses on church architecture, and for many years had been consulting architect for the diocese of Truro.

When the great war relieved him largely of professional work Mr. Sedding associated himself with Sir Arthur Pearson in promoting the St. Dunstan's Hostel for Blinded Soldiers and Sailors; and by addressing meetings in the North of England and in other ways he raised thousands of pounds for it. His enthusiasm for the scheme was enhanced by the fact that he was then very nearly blind himself.

In 1911, owing to failing eyesight, Mr. Sedding took into partnership Mr. Reginald Wheatly [F.], and on Mr. Wheatly's resignation, in 1914, Mr. Basil Stallybrass [*Licentiate*], who carries on the business at Plymouth.

MR. REGINALD F. WHEATLY writes:—

For an architect to lose his eyesight is one of the greatest misfortunes that can befall him. Edmund Sedding's sight gave way quite early in his career, and for years before his death was so bad that he could only make out large-scale drawings with strongly blacked-in lines. Many men would have given up work in despair, but his cheerfulness and optimism under this affliction and under other heavy troubles he had to bear were wonderful and endeared him to

everyone who came in touch with him. Very many of our West Country churches bear evidence of his taste and genius.

The picture of him left in my mind from my association with him is of his standing before an easel with a large magnifying glass in one hand and a soft pencil or piece of charcoal in the other, making a drawing somewhat difficult to decipher but which had always something worth while in it and which made one realise what a loss to church architecture his sight was; or, again, the picture of him climbing about among the roof timbers of a church or astride the parapet of a tower feeling the mouldings to give a date to them, with below the anxious, upturned faces of the vicar and churchwardens. He had a highly developed sense of touch, and used it invariably and most successfully instead of his eyesight when examining old work.

Much of his work was the restoration of West Country churches, and his method was always to retain every bit of old work that could be found—very different from the vandalism that some of the Cornish churches have been subjected to in the wholesale scrapping of the beautiful carved oak roofs and replacement with pitch pine. I have often seen him fighting tooth and nail with a committee to save a bit of an old roof, and he usually managed to get his way.

When one looks at his work in screens, reredoses, etc., such as at Crantock and St. Erth, a church restored by his uncle, John Sedding, one cannot help feeling that had he retained his eyesight he would have made for himself as great, if not a greater reputation in church work than his uncle.

He has been buried in Crantock churchyard beside the small country church which he transformed from a dilapidated barn-like interior into the beautiful interior it is now, bringing it back to its richness of former days.

REGD. F. WHEATLY [A.].

DR. P. J. H. CUYPERS [*Hon. Corr. M.*].

Pierre Joseph Hubert Cuypers, who died on the 3rd March in his 94th year, had been an Honorary Corresponding Member of the Institute for fifty-five years, having been elected in January 1866. In 1897 he was awarded the Royal Gold Medal in recognition of the excellence of his work as an architect. As far back as 1849 he had been awarded a gold medal for architecture in his own country. His first work was the restoration of the Minster of Our Lady at Ruremonde, and up to 1897 (when particulars of his career were obtained for the purposes of the Royal Gold Medal) he had built one cathedral and sixty-one churches and chapels, had restored fifty-seven ecclesiastical buildings, mostly cathedrals and churches, and built museums, railway stations, domestic buildings, monuments, besides his great work of the Royal Museum at Amsterdam. He was instrumental in starting schools all over Holland for the training of building craftsmen. It is stated that the celebration of his seventieth birthday was the cause of almost national rejoicings in

Holland. Besides the numerous honours conferred upon him by his own country he was the recipient of high distinctions from France, Spain and Belgium. The funeral ceremony was performed in the Cathedral of Ruremonde.

Lord Moulton [*Hon. A.*].

Lord Moulton, P.C., K.C.B., G.B.E., F.R.S., was elected an Honorary Associate of the Institute in 1883. When at the Bar he strongly advocated legislation to diminish the inconveniences and hardships arising from the law dealing with rights of light. In March 1900 he read before the Institute a paper advocating reform in the law, and afterwards joined the Committee set up by the Institute and the Surveyors' Institution to take steps to effect an alteration in the law. In June 1903, acting on behalf of the two Institutions, he introduced into the House of Commons an amending Bill. The decision of the House of Lords in the Colls case, however, readjusted the law, and the Bill was eventually dropped.

Papers of the British School at Rome.

Vol. IX. of the *Papers of the British School at Rome* has been received [Macmillan & Co., Ltd., 1920, 42s. net]. The first Paper consists of a biographical notice by Sir John Sandys of Dr. James Peddie Steele (4th May, 1836–16th July, 1917), one of the oldest and best of the friends of the School, whose kindness and hospitality, as well as his classical attainments, endeared him to many British scholars. Mr. G. F. Hill contributes a valuable Paper on the Roman Medallists of the Renaissance to the time of Leo X. In the third Paper the Director of the School, Dr. Thomas Ashby, gives some further information about the history of the Palazzo Odescalchi as the result of investigations made in the Boncompagni-Ludovisi archives by Signor Francesco Tomassetti. In the fourth Mr. Robert Gardner resumes his studies of the Roman road system of Southern Italy, and describes the highway running eastward from Rome to the Adriatic. The fifth Paper, by Dr. Ashby, is a contribution of a bibliographical nature to the study of the history of the famous collections of sculpture which adorned the city of Rome in the Renaissance period and which only began to be dispersed in the eighteenth century. In the sixth Paper Monsignor Mann, Rector of the Beda College in Rome, the historian of the mediæval papacy, gives the results of his studies of the portraits of the Popes, which have an especial value owing to the destruction of most of the series which adorned the basilica of S. Paul's-outside-the-Walls until the disastrous fire of 1823. Mrs. Arthur Strong, the Assistant Director, contributes three short Papers—(1) a Sepulchral Relief of a Priest of Bellona; (2) A Bronze Plaque, with a portrait of Aristotle, in the Rosenheim Collection; (3) Note on a Copy of the *Responsions* of Robert Parsons, which was the gift of Cardinal Allen to the learned Gerald Vossius. The volume closes with the Paper by Mr. H. Chalton Bradshaw [*A.*], Rome Scholar in Architecture, consisting of his Study for the Restoration of Praeneste, with reproductions of his drawings.

Books Received.

The Things which are Seen: A Revelation of the Visual Arts. By A. Trystan Edwards, M.A. Oxon., A.R.I.B.A. 80. Lond. 1921. 18s. net. [Philip Alan & Co., Quality Court, Chancery Lane.]



9 CONDUIT STREET, REGENT STREET, W., 19th Mar. 1921.

CHRONICLE.

Competition for Improved Type of Public House.

It was announced at the General Meeting last Monday that the Council had received the report of the President, Mr. John W. Simpson, who was appointed Assessor in the Competition promoted by the Worshipful Company of Brewers for a Type Design for a Licensed House in a Large Town, and that his award was as follows:—

Design placed first—premium of £300 awarded to the authors of design No. 14: Messrs. Curtis & Natusch and Messrs. White & George, 34 Bedford Square, W.C., Associated Architects.

Design placed second—premium of £150 awarded to the author of design No. 42: Mr. C. H. James, 19 Russell Square, W.C.

Design placed third—premium of £50 awarded to the authors of design No. 72: Messrs. Blount & Williamson, 5 Duke Street, Adelphi, W.C.

Special Mention—design No. 1: Messrs. L. G. Hannaford & H. G. Cherry.

The designs submitted in the Competition numbered altogether seventy-eight, and all are on view in the Institute Galleries until Thursday, 24th March.

The Architects' Welcome Club at the Building Exhibition, Olympia, 12th–26th April.

The Prince's Rooms at Olympia during the Building Exhibition next month are to be equipped as the Architects' Welcome Club which is being organised by the R.I.B.A., the Society of Architects and the Architectural Association. The accommodation will include two club rooms, where newspapers and technical journals will be available at tariff charges. There will also be a President's room, and an inquiry office where an official representative of the Club will be in attendance daily.

Tuesday, 12th April.—Opening day of the Exhibition and of the Architects' Welcome Club at the Prince's Rooms. All architects and their friends visiting the Exhibition are cordially invited to use the Club premises.

Saturday, 16th April, 3 p.m.—Reception of architects and other guests in the Pillar Hall by the Presidents and Council of the R.I.B.A., the Society of Architects, and the Architectural Association.

Friday, 22nd April, 6.30 p.m. for 7 p.m.—Public dinner in the Pillar Hall, when representatives of the Royal Institute of British Architects, the Society of Architects, and the Architectural Association, kindred professions, public bodies, the building industry, Government departments, and foreign architects, will be the guests of the Club. Tickets, not including wine, may be obtained from any of the Organising Secretaries, and, during the Exhibition, at the Club, by architects and their friends, including ladies, exhibitors, and any others who may desire to attend.

Exhibition of Students' Work.—An important and representative Exhibition will be held in the Large Conference Hall of Architectural Students' work. All the leading schools in the country will be represented, and various prize drawings of the year will be shown. The Exhibition will be open to the public generally.

Popular Lectures.—Two public lectures will be given on dates to be announced. Admission free. These lectures have been arranged for members of the public exhibiting at or visiting the Exhibition, to interest them in architecture generally, and it is hoped that architects will do their best to make the lectures known.

Research on Building Materials : Mr. Munby's Paper.

At the General Meeting of the 18th April, during the reading of Mr. Munby's Paper, "Research on Building Materials," some lantern slides, specially prepared and shown for the first time, will be exhibited, through the courtesy of the Geological Survey, of some of the building stones which the Survey Authorities, in conjunction with the R.I.B.A. Science Committee, have had exposed in London for ten years. The slides will show the condition of the stones at the beginning and end of this period. At a later date it is hoped that a report on the tests will be published in the JOURNAL, but this awaits further deliberations on the results.

R.I.B.A. Visit to Westminster Hall.

On Saturday, the 5th March, thirty-eight members of the Institute visited Westminster Hall for the purpose of seeing the progress of the restoration of the roof, this being the first of a series of visits to places of interest which is being arranged for members by the Art Standing Committee. The party was met by Sir Frank Baines, O.B.E., M.V.O., who, before taking the visitors up to the roof, gave an extremely interesting description of the work that is being done, illustrating his remarks by a model and by drawings which have been made of every part of the work and of the state in which the timbers were found. This was listened to with the deepest interest, and the Vice-President, Mr. Walter Cave, echoed the feelings of all present when he proposed a very hearty vote of thanks to Sir Frank for his address. The party was then shown—on the floor of the Hall—large baulks of timber which had been almost entirely eaten away by the ravages of the ant. On going up to the scaffold, the visitors were very deeply impressed with the mag-

nitude of the work. Looking at the drawings and the model gave but a slight idea of the enormous size of the timbers that have to be dealt with and the extraordinary difficulty in getting the new timber and reinforcements into position. The work is certainly being carried out most skilfully, and the result is extremely satisfactory in that none of the reinforcement can be seen and as many as possible of the original timbers are embodied in the new work. A description of the work and the manner in which the strengthening and restoration is being carried out has been so fully and so ably set forth in Mr. A. O. Collard's account of the Science Committee's visit to Westminster Hall in June 1919* that it is unnecessary to add anything further. Mr. Collard's description follows Sir Frank Baines's exhaustive Report to the First Commissioner of Works, which, with its wealth of illustrations, has been published as a Blue-Book,† a copy of which is in the Institute Library.

S. HURST SEAGER [F.].

The Times of the 15th inst. gave the following particulars of the roof and of the measures which are being taken to preserve the old timbers:—

The science of entomology has been called in to protect one of our noblest buildings. Westminster Hall, the splendid scene of many great events in our history, has been brought to the verge of destruction by a small beetle. It was built by William Rufus in the eleventh century, has a length of 290 feet, a width of 68 feet, and is 90 feet in height. Its massive buttressed walls seem to have been designed to carry a stone roof, but the first roof was of oak beams. These did not stretch the whole span but were supported by columns arranged to form aisles. Richard II. made many alterations, completed in 1399, and replaced the first roof by carved oak arches stretching the whole span. These have ripened to a rich golden colour and form the greatest glory of the Hall. Repairs were made from time to time, but it is an odd fact that the inserted newer pieces of oak, whether from some ill-judged attempt to "tone" them or from some difference in quality, have turned black.

Sir Charles Barry, architect of the House of Commons, examined the roof in the last century, found it defective, but appears not to have grasped the principle of construction or the extent of the damage, and merely added some unsatisfactory reinforcements of wood and metal. In 1911 it came under the charge of the Office of Works as a result of the Ancient Monuments Act. A full examination made by Sir Frank Baines, the official architect, disclosed an appalling condition.

It was only by a miracle that the roof had not fallen in; a catastrophe might happen at any moment. There was no dry-rot, but the ravages of the deathwatch beetle (*Xestobium tessellatum*), a little creature whose love-call has won for it its popular name, had turned the solid oak into a structure as spongy and friable as pumice stone. Many of the arches were feet out of alignment; joints were eaten through. Drastic steps had to be taken. Readers of *The Times* will remember the bitter controversy over the course to be adopted. The final decision was to retain the beautiful old carving, replacing it only where absolutely necessary, but to use it only as a mask concealing from the eye a new skeleton of steel which carried all the weight.

This was denounced by many as an architectural crime, a flagrant æsthetic dishonesty. But from the engineering

* "The Roof of Westminster Hall" (JOURNAL R.I.B.A., July 1919, pp. 205-7).

† On the Condition of the Roof Timbers of Westminster Hall, with Suggestions for Maintaining the Stability of the Roof. [Cd. 7436.] 1914. 1s. 4d. H.M. Stationery Office.

point of view it was practical, and those who have had the pleasure of inspecting the portion already finished must agree that the old beauty has been preserved. But there was a further difficulty. The beetle, the real angel of destruction, was still present. The edible parts had been eaten away in much of the oak, but there were still occasional live adults and many grubs. These might complete the work of destruction on the old wood, attack the new, and destroy all the remaining tracery. And so in 1913 a scientific committee, containing architects, chemists, and entomologists, began to sit.

Many suggestions were considered. It was proposed, for instance, to seal the building and fill it with chloroform vapour. But it was doubtful if the poisonous vapour would penetrate the wood in any reasonable time, and uncertain if it would destroy eggs and chrysalides. And even if it were effective against the insects, it might have unpleasant effects on the town. The liberation of over a million cubic feet of a slowly dispersing poisonous gas was not an attractive idea. The application by spraying or painting of naphthalene dissolved in carbon tetrachloride was admitted to be destructive to the beetles, but would liberate an evil-smelling and highly inflammable vapour. Other proposals had to be rejected for similar reasons, and the committee dissolved without having reached a conclusion.

One of the members of the Committee, Mr. H. M. Lefroy, formerly Government entomologist to the Government of India, and then professor of the subject at the Imperial College of Science, resolved, almost as a forlorn hope, to try to work out the problem with his pupils, and to find an answer that would fulfil the rigid conditions. The substance would have to destroy the insects and yet be non-poisonous, non-inflammable, and have the least possible odour. Its effects would have to be relatively permanent. The risk of introducing rot by the use of an aqueous solution would have to be avoided, and the golden colour of the wood left unspotted.

The first step was to investigate the life history of the insect, in the hope of finding some weak link in the chain which could most easily be broken. "Wild" beetles were found to live on oak and willow trees, and a fortunate chance discovered a stock of material for study. The adults can fly, but are very sluggish; it seemed probable that the pest had reached the roof as chrysalides or grubs in the old wood or in repairs. They themselves do not tunnel, but creep into chinks, especially where joints do not fit tightly. There they lay the eggs, and the grubs, as soon as they are hatched, begin to tunnel along the grain of the wood, eating out the softer parts. When they are ready to pupate they carry a tunnel until it is separated from the surface only by the thinnest film, often not much more than the patina of London smoke. There the motionless chrysalis rests, the metamorphosis is gone through, and ultimately the beetle emerges. It has then to break through to the surface, an easy task in fresh wood, but so difficult in old wood that many dead beetles were found just below the surface. A substance that would form a permanent repulsive film would keep any adult beetles from wandering into the crevices suitable for egg laying and, repelling the boring grubs from the surface, would force them to pupate so deep in the wood that the beetles could not break out.

After many trials, cedar wood oil, in quantities so small that it was innocuous to the human nostril, was found extremely distasteful to beetles and grubs. Solid paraffin suggested itself as a medium almost indestructible when exposed to London air and smoke, and in a thin layer so transparent as not to obscure the colour of the surface to which it was applied. The liquid known as di-chlorobenzene provided a solvent which gave penetrating power, and was almost absolutely unflammable and non-poisonous as a vapour. The formula was 92 per cent. of the solvent, 3 per cent. of soap, 3 per cent. of paraffin wax, and 2 per cent. of cedar wood oil. This is sprayed on every surface as it is exposed, on every separated piece of wood, old or new, and again on the finished surface when the reassembling has

been done and the steel fitted in. The di-chlorobenzene slowly evaporates, leaving behind a transparent film of wax impregnated with the oil. The newly treated wood undoubtedly has an odour, and the atmosphere of the Hall recalls that of the "doping" room of an aeroplane factory. But the wood that has been treated for some time gives off no appreciable scent, and has lost none of its golden colour. The work has been in progress for several years, and so far the treatment seems to be completely effective.

The City Churches.

The following Memorial is published at the request of the President of the Royal Academy and the other signatories of the Memorial:—

In June, 1920, the President of the Royal Academy invited the principal bodies in London representing architecture, art and archaeology to confer together on the recommendations of the City of London Churches Commission, 1919. Twelve societies or institutions nominated representatives as follows:—

Royal Academy of Arts :	Sir Aston Webb, K.C.V.O., C.B., P.R.A.
National Trust :	J. Seymour Lucas, Esq., R.A. The Earl of Plymouth. Nigel Bond, Esq. S. H. Hamer, Esq.
Society for the Protection of Ancient Buildings :	Earl Ferrers. The Rev. T. T. Norgate.
Society of Antiquaries :	Sir Hercules Read, P.S.A. C. R. Peers, Esq.
Victoria and Albert Museum:	Sir Cecil H. Smith, C.V.O.
Royal Institute of British Architects :	John W. Simpson, Esq., P.R.I.B.A.
London Society :	George Hubbard, Esq., F.S.A. Sir Reginald Blomfield, R.A., Litt.D. Carmichael Thomas, Esq.
City Churches Preservation Society :	Edwin Freshfield, Esq.
London Survey Committee:	Philip Norman, Esq., LL.D.
Civic Arts Association :	Edward Warren, Esq., F.S.A. Arthur Stratton, Esq.
British Archaeological Asso- ciation :	Charles E. Keyser, Esq., F.S.A.
Metropolitan Public Gardens Association :	Bernard Gibson, Esq. Basil Holmes, Esq.

Conferences were accordingly held at the Royal Academy, and it was decided to submit the following considerations, recommendations and suggestions for the consideration of the Bishop of London:—

At a time when the worship of material success has secured a hold upon such large numbers of the people of this country, it is, in our opinion, a most dangerous policy for those in power to diminish the number of churches in a commercial centre like the City of London, where, whether in actual use or not, they do at least serve as reminders that there are other and worthier goals than the acquisition of wealth alone.

We feel strongly that an evil precedent will be created if the Church of England is a party to the destruction of monuments of the past which are irreplaceable; and we are glad to find that Lord Hugh Cecil, in his note appended to the report of the Commission, in some degree shares our misgivings on this point. Further, the fact that the monuments are churches on the one hand, and on the other that the consideration is a monetary one, will, in our judgment, re-act upon the Church itself in a mischievous way.

There is the further argument, set out by Mr. Edwin

Freshfield, that the churches built after the Great Fire were not a gift to the Church; they were rebuilt by taxation of the people, and they are supported by rating in lieu of tithes, a fact that is not brought out in the report of the Commission.

The City Corporation has entered a strong protest against the removal of these churches, and in our opinion far stronger reasons than those at present put forward are required to justify the destruction of these buildings and the disposal of their sites in order to erect churches in other places unconnected with the City, and for people whose duty it is to provide their own churches, and whose increased incomes should make it possible for them to do so.

Independently of the actual legal ownership of the churches, we consider it important to remember that in a sense they are the inheritance, not of the diocese of London, nor even of the people of this country alone, but equally of our kinsmen of the Colonies and Dominions, who are as a rule possessed of a more reverent spirit than ourselves for such memorials of the past, and who, it can hardly be doubted, will regard the proposed destruction with dismay and regret.

We are well aware that there is already throughout the country a tendency to destroy ancient remains, either through ignorance or from the prevalence of a too commercial spirit. If London were to set an example of such wholesale destruction as is now proposed, it would, in our opinion, have a fatal effect over the kingdom at large, and lead to the disappearance of much that is precious.

Although the fabrics of the churches are no doubt the main subject to consider, it has to be borne in mind, in addition, that they frequently contain memorials of distinguished citizens, intimately associated with the history of the City or of the country. Removal of the buildings would assuredly destroy the significance of such memorials, even if they continued to exist elsewhere.

There is further the question of the equipment of these buildings, not only of a structural character, such as wood-work, glass and bells, but more portable objects such as plate; in many instances these have been dedicated to the service of an individual church, and their alienation would involve the destruction of important historical data.

It is evident that, in the case of some churches, the great value of the site lies in the churchyards. These are at present protected by Act of Parliament; but it would be a flagrant reversal of the public policy of the last thirty years if these, almost the only remaining open spaces in the City, were to be covered with buildings. If and when such a proposal becomes imminent, it is certain that the public will enter a vigorous protest, quite apart from the question of the consecration of the land itself.

We recognise that the distinguished gentlemen who formed the Commission were amply qualified to decide upon the greater part of the issues involved; but we venture to demur, with all respect, to accepting them as authorities upon artistic and architectural questions. We think that our reluctance is justified by the suggestions in the Report (a) that in seven cases the body of the church should be demolished and the tower left standing, and (b) that in some cases the internal fittings might be preserved for use in another church. We regard both these proposals as architecturally and artistically improper.

In the same way we consider it is not a solution to remove and re-erect these churches elsewhere. It would be an artistic blunder to re-erect them in any surroundings not identical with the original sites. Archaeologically it would

be dishonest. Moreover, many of the churches in plan and construction would be singularly unsuited to the needs of a suburban parish.

For the foregoing reasons we desire to protest emphatically against the destruction of the nineteen churches scheduled by the Commission. We notice that the Commissioners used the phrase that "due reverence" should be observed in devoting some of these sacred buildings to secular uses. We would venture to say that to recommend the destruction of any one of them can hardly conduce to their reverent treatment.

ASTON WEBB, *Chairman*.

In July, 1920, this Memorial was forwarded to the Bishop of London, who has sent the following reply:—

FULHAM PALACE, S.W.6, *February 16th, 1921.*

DEAR SIR ASTON WEBB,—Thank you for your letter of the 14th instant, on the subject of the City churches.

I can assure you that no wholesale demolition of nineteen City churches is contemplated. At the present time I am giving my mind to the question of grouping certain of the City parishes, or the possibility of uniting them with poor parishes in the suburbs.

It is possible that some few may eventually have to be pulled down or removed, but this would only be done after grave consideration of every case and due regard to the general welfare of the Church at large.

While I hate myself to remove any old church, I cannot shut my eyes to the pressing question of the poverty of the Clergy, and the provision of the spiritual needs of people who have at present no church at all and no means of providing one.—Yours sincerely,

A. F. LONDON.

The *Burlington Magazine*, Ltd., purpose addressing an appeal to the Bishop of London regarding the proposed destruction of the City churches. The appeal emphasises the importance of these edifices as works of art, and the hope is expressed that they may be allowed to remain intact and unutilised. It is believed that a formidable list of signatures might be effective in influencing the authorities to reconsider the matter of at least the more important churches, and the *Burlington Magazine* have sent a copy of the appeal to the Institute in order that members in sympathy with the movement may call in and append their signatures. The document is conspicuously placed in the Library.

The City Lands Committee and the Artistic Development of the City.

In the Court of Common Council on Thursday last Mr. Deputy Millar Wilkinson asked the Chief Commoner if his attention had been called to the articles and letters in *The Times* with reference to the establishment of a Committee of Taste, or a Ministry, or some other authority, to deal with the artistic aspect of the City, and if he could give any information on the matter.

Mr. J. R. Pakeman, C.B.E., answering the question in the absence of the Chief Commoner, said that the Corporation's attention had been called to this subject long before the articles appeared in *The Times*. In July last Mr. Deputy Bird moved the following resolution: "That it be referred to the City Lands Committee to consider and report to this Court as to what

steps should be taken for the artistic and architectural development of this City and for the preservation and permanent indication of premises of antiquarian and historical importance." The Court agreed, and the matter was now under consideration by the City Lands Committee. The present Chief Commoner and the City Surveyor, continued Mr. Pakeman, were both members of the Council of the Royal Institute of British Architects, and were in touch with that important authority with regard to the point raised. The City Lands Committee had already received a deputation from that Institute with reference to a branch of this most important subject. Mr. Millar Wilkinson could rest assured that the Corporation had the matter well in hand.

COMPETITIONS.

Renfrew and Rothesay War Memorials.
Queensbury War Memorial.

61x2

The Competitions Committee desire to call the attention of Members and Licentiates to the fact that the Conditions of the above Competitions are unsatisfactory. The Committee are in negotiation with the promoters in the hope of securing an amendment, and meanwhile Members and Licentiates are advised to take no part in the Competitions.

ALLIED SOCIETIES.

South Wales Institute of Architects.

The Annual Dinner of the South Wales Institute of Architects was held at Cardiff on 10th March.

Mr. Ivor P. Jones [A.] (President of the South Wales Institute of Architects) was in the chair, and the guest of honour was Mr. John W. Simpson, President R.I.B.A., supported by Sir Charles Ruthen [F.] (President of the Society of Architects), Mr. F. R. Yerbury (Secretary of the Architectural Association), and Mr. T. Taliesin Rees [F.] (President of the Liverpool Architectural Society), who were the responders to the President's Toast of the Royal Institute of British Architects, the Society of Architects, the Architectural Association and the Allied Societies.

Mr. Ivor Jones reviewed the recent work of the South Wales Institute of Architects, pointing out the great increase of membership and the genuine awakening of interest in architectural matters in South Wales, and emphasising the fact that but for the wise guidance of the Royal Institute of British Architects, the sympathetic help of the Society of Architects, and the interest of the Architectural Association and the Allied Societies, the South Wales Institute could not possibly do the work it had done in the past and hoped to do in the future.

Mr. John W. Simpson, in responding for the R.I.B.A., pointed out that architects needed to keep before them the ideal of "good building" to be attained by a high standard of practice, and that they could, by seeking election on municipal councils, do a great deal for the community with their special knowledge, and also for the profession by showing the public that architects, because of their training, are practical men. He also laid stress on the need for a proper understanding between architects and builders, resulting

in good work, which would in its turn win the approval of the general public and so gain for architects generally the credit to which they were entitled.

Sir Charles Ruthen, responding for the Society of Architects, pleaded strongly for Registration, pointing out that other professions did not allow anybody to practise until he had proved himself capable and efficient, whereas the so-called architect was often an individual possessing no architectural qualifications, the result being a general lowering of the high standard aimed at by the profession.

Mr. F. R. Yerbury, responding for the Architectural Association, referred to the educational work of the Association and the South Wales School of Architecture, predicting a successful career for the latter under its able head, Mr. W. S. Purchon.

Mr. Taliesin Rees, responding for the Allied Societies, spoke of the decision of the R.I.B.A. to hold their Council meetings periodically in the provinces, a movement which would give the Allied Societies more prestige locally and greatly encourage them in their work.

The toast of the South Wales Master Builders' Employers' Federation was proposed by Mr. H. C. Portsmouth, F.S.Arc., in which he referred to the danger to the architectural profession through the activities of the Office of Works and the further waste of public money by a Government Department endeavouring to perform the impossible by acting as its own architect and contractor.

Mr. E. W. King, President of the Federation, responded.

Birmingham Architectural Association.

The last general meeting of the session of the Birmingham Architectural Association was held at the Society of Artists' Rooms, Birmingham, on the 11th March. The President, Mr. H. T. Buckland [F.] took the chair, and Captain G. Salwey Nicol [F.] read a Paper entitled "The B.A.A. Excursion to Bourges." The lecturer said that people often wonder why architects travel long distances and spend their leisure in studying such old buildings as the Gothic cathedrals, which seem to have no relation to the problems submitted to them by this material age. Stimulated by the enthusiasm of students, they sometimes visit an old city, and, fascinated by the glamour of age and the theories of archaeologists, they have some return for their trouble, but they return with the idea that making sketches of these old places is but an innocent hobby. This view is too superficial. They have not realised what a Gothic cathedral means. A great building such as St. Etienne at Bourges is probably one of the finest flowers of human civilisation. The lessons which can be learnt from such buildings will bear fruit when the materialism of the present day can be shaken off, and it is our duty in the meantime to keep alive that appreciation and respect for the great achievements of the past. The architects who journeyed to Bourges from Birmingham in the early summer of last year combined the delights of living in a fairly modern town with sketching the many examples it contains of buildings of various ages. The cathedral, which naturally formed the chief attraction of the pilgrimage, has an interior of five lofty compartments, arcaded and vaulted in stone, with that skill and grace for which the masons of the thirteenth and fourteenth centuries are so famous. The west front, in the evening sunlight, with its great stretch of steps, bearing its range of five open-armed portals and surmounted by two lofty towers guarding and supporting the great rose window, is a sight which cannot fail to impress the beholder. No finer opportunity for the display of stained glass can be found than the three continuous clerestories of

Bourges, which stretch from west to east without any interruption, for the plan is based on the simple lines of a Roman basilica. The whole of the windows are unfortunately not glazed with the original glass, but a considerable proportion remains, and enables it to vie with Chartres in this glorious possession. Such a pilgrimage as this is always too short, but one returns with delightful memories and with a number of sketches which will never let one forget the circumstances under which they were made.

Mr. Nicol illustrated his lecture with many water-coloured drawings, sketches and photographs made during the visit, and also with a number of lantern slides. At the conclusion of the lecture a vote of thanks was proposed by Mr. Arthur Harrison and seconded by Mr. J. Coulson Nicol, who himself showed a few lantern slides which he had obtained at Carcassonne and Albi during the visit.

Nottingham and Derby Architectural Society.

In order to stimulate public interest in architecture the Nottingham and Derby Architectural Society have for the past few years arranged a popular lecture to be given at the University College, Nottingham. Mr. Harry Gill was the chosen lecturer this year, and on Friday, 11th March, with "Newstead" as his subject, for over an hour he held the interest of a large and appreciative audience. He told not only of Newstead Abbey and its foundation, but of the history of the Byron family, of Robin Hood, and Friar Tuck, with ever and anon an interesting sidelight into mediaeval craftsmanship and devices of construction.

Alderman E. Huntsman, who presided, said that there was never a time when it was more necessary to cherish a love of the beautiful than at present. The college had, as one of its chief functions, the cultivation of such gifts.

Newstead, said Mr. Gill, was founded by the Austin or Black Canons. It was the third of the religious houses founded by King Henry after the murder of Becket. The title, "Newstead Abbey," was a misnomer, as Newstead was only a priory, and was occupied by canons and not by monks. When the dissolution of the monasteries occurred, the church was pulled down. Nearly the whole of the present house stands on and is incorporated with monastic walls. The west front, which still remains after six and a half centuries, Mr. Gill considered a tribute to the craftsmen of old. "Do not be led away," he said, "by the popular fallacy that these buildings were erected by the monks who had plenty of time at their disposal. They were not; they were built by craftsmen who had to earn their living. In this instance they came from York, completed the church in 1270 and went on to Southwell. Sir John Byron came into possession in 1540, and at once began to put it to secular uses. Practically every stone was used for utilitarian purposes." In the course of the lecture, Mr. Gill said that he knew it had become the fashion to look upon Robin Hood as a myth. He thought it would be easier to prove the legend than to disprove it. Many names found in the records of Newstead, such as Robin Hill and Seariett Cross, were reminiscent of the outlaw.

The speaker went on to describe the discovery of a brass lectern, containing documents relating to the priory, which was recovered from the pond in the grounds, into which it had been cast. This lectern was now to be seen in the choir at Southwell.

Byrons had been associated with the neighbourhood long before they came into possession of Newstead. One, who came over with William the Conqueror, held the manor of Hucknall when Domesday Book was compiled.

MINUTES. X.

At the Tenth General Meeting (Ordinary) of the Session 1920-21, held Monday, 14th March, 1921, at 8 p.m.—Present: Mr. John W. Simpson, *President*, in the Chair; 41 Fellows (including 14 members of the Council), 49 Associates (including 3 members of the Council), 4 Licentiates, and numerous visitors—the Minutes of the Meeting held 28th February were taken as read and signed as correct.

The Hon. Secretary announced the decease of the following members: Lord Moulton, P.C., K.C.B., G.B.E., F.R.S., *Hon. Associate*, elected 1883; Comte Robert de Lasteyrie, *Honorary Corresponding Member*, elected 1904; Dr. Pierre Joseph Hubert Cuypers, *Honorary Corresponding Member*, elected 1866, *Royal Gold Medallist* 1897; Arthur Hill, of Cork, elected *Associate* 1866, *Fellow* 1887, placed on List of *Retired Fellows* 1918; Wm. Cecil Hardisty, *Fellow*, elected 1906.

The following members, attending for the first time since their election, were formally admitted by the President: Samuel Nathaniel Cooke, Spencer Carey Curtis, Austin Durst, Arthur John Clifford Ewen, William Herbert Hobday, Geoffrey Norman, John Saxon Snell, *Fellows*; and Frederick Ernest Crutchley, Thomas Francis Ford, Horace Herbert Laws, Simpson Low, James Macgregor, Percy May, Aston Charles Pickford, Lawrence Henry Shattock, John Stewart Thomson, *Associates*.

The Hon. Secretary announced the President's award in the competition promoted by the Worshipful Company of Brewers for a Type Design for a Licensed House.

Mr. H. Percy Adams [F.] having read a Paper on COTTAGE HOSPITALS and illustrated it by lantern slides, a discussion ensued, and a vote of thanks was passed to him by acclamation on the motion of Dr. Vere Pearson, seconded by Dr. Arthur E. Giles.

Mr. Adams having acknowledged the vote, the proceedings closed, and the meeting separated at 10 p.m.

Changes of Address.

Messrs. H. Percy Adams [F.], Charles H. Holden [F.], and Lionel G. Pearson [F.] have removed from 28, Woburn Place, to 9, Knightsbridge, Hyde Park Corner, S.W.1.

Mr. S. Hurst Seager [F.]: London address, c/o High Commissioner for New Zealand, 415, Strand, W.C.

Messrs. David Barclay Niven [F.] and Herbert Wigglesworth [F.] have removed from Gwydir Chambers, High Holborn, to 7, John Street, Bedford Row, W.C. Telephone: Museum 1733.

NOTICES.

THE ELEVENTH GENERAL MEETING (ORDINARY) of the Session 1920-21 will be held MONDAY, 4th April, at 8.30 p.m., for the following purposes:—

To read the Minutes of the Meeting held 14th March; formally to admit members attending for the first time since their election.

To read the following Paper:—

THE LAND SETTLEMENT BUILDING WORK OF THE MINISTRY OF AGRICULTURE AND FISHERIES.

By SIR LAWRENCE WEAVER, K.B.E., F.S.A.

WANTED, by a firm of architects and engineers in Hongkong, a young Architect (A.R.I.B.A.) as Assistant, with a view to ultimate partnership. Good general knowledge of all branches of the profession, including design and supervision of reinforced concrete buildings. Full particulars from the Secretary R.I.B.A., 9, Conduit Street, W.

LICENTIATE (40) desires Partnership, London preferred. Twenty years' experience domestic work, housing and estate development. Can bring small practice to London Office. Apply Box 1031, c/o Secretary R.I.B.A., 9, Conduit Street, W.

A.R.I.B.A. (29), at present in charge of large drawing office in India, desires change to London, owing to climate. Could be free shortly provided reasonable salary and prospects assured. Previous experience and training in London. Full particulars and references. Apply to Box 421, care of Secretary R.I.B.A., or "Architect," care of Cox & Co., Bombay.

